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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, Administration and Maintenance of Hospitals and Sanatoriums.

Vol. XXXV *November, 1930* No. 5

Problems—Ours and Others'

A. H. A. Presidential Address

By CHRISTOPHER G. PARNALL, M.D.
President, American Hospital Association, Rochester, N. Y.

THE last meeting of the American Hospital Association a year ago last June was particularly notable because it was held in conjunction with the first International Hospital Congress. An unusual opportunity was provided for hospital workers from all over the world to learn something of each others' methods and problems. The next congress will be held in Vienna in June, 1931, and it promises to be a landmark in the history of the hospital movement throughout the world. The influence of this association is not confined to the countries its membership includes but reaches literally every section of the globe. A great responsibility rests with us to exercise the highest type of leadership and I am sure that we shall not fail to respond to the challenge.

The past year has been a difficult one for hospitals and hospital people and so it may not be inappropriate for me now to discuss some important problems that we must recognize and that are engaging the attention of other organizations whose interests are somewhat parallel to ours.

The stock market crash was far-reaching. The hospitals are feeling the pinch just as acutely as are individuals and commercial institutions, but the stock market collapse after all was an effect and not a cause. We are now brought face to face with stern realities which in the heyday of inflated values had almost been lost sight of. There is even little comfort for the hospitals that with present unemployment it is easy to find help, for now it is a problem to find funds to employ the least amount of personal service possible to carry on the work of our institutions. Social and economic changes, worldwide in character, call for a study of our problems with tolerance and intelligence. Readjustment will be necessary and hospitals as well as individuals in the field of hospital and medical service must meet public demands and supply public needs.

The hospitals not so long since were publicly accused by a well known surgeon of whining, but if you are familiar with the drift of both individual expressions and official proceedings at the Detroit meeting of the American Medical Association in June, you will come to the conclusion that some of the doctors, too, are doing their share of "squawking." There is no profit in closing our eyes to facts; there is nothing to be gained in

Goals

IN this thoughtful paper, Doctor Parnall has carefully considered the vexing problems that loom large in hospital affairs at the present time: financing; the trustee; the cost of medical and hospital service; nursing service and nursing education; medical service; standardization. Nor has he overlooked the responsibility of the American Hospital Association to assume an ever increasing obligation to its membership.

fighting the inevitable. Neither the hospitals nor the medical profession will gain anything by following the example of two gentlemen of antiquity who essayed, the one to sweep back the sea, the other to tilt at windmills.

One of the pressing problems of hospitals is that of hospital occupancy or rather, perhaps, the lack of it. Studies of hospital statistics gathered from various sources show that during the year the occupancy of hospital beds has fallen off to an alarming extent. Low occupancy means high per capita cost and unbalanced service. It may indicate bad judgment in planning or a failure to consider community needs. It is in many instances unavoidable and simply one of the results of our economic state. While it will undoubtedly be temporary for the most part, it should cause us to pause and consider carefully before we advocate extensive expansion of hospital facilities.

The government itself furnishes perhaps the most outstanding example of encouragement of an unsound policy of overbuilding. The vast program providing additional hospitals under the direction of the Veterans' Bureau is, in the opinion of many thoughtful persons, unsound and even dangerous policy. Legislation providing for the care of veterans for ailments in no way connected with their line of duty we believe is an attempt on the part of politicians to curry favor at the expense of a long-suffering public. It is right and proper that a veteran should receive every consideration in the way of medical service and hospital care which can be given him, providing his disability is the result of his military service but to coddle him to the point where he expects as a right to be entitled to care for illnesses in no way attributable to his service, means setting up a pernicious and dangerous system, socialistic in character and unsound economically. If the existing unoccupied beds in civil hospitals were utilized there would be no need of additional veterans' hospitals.

Endowments Are Insufficient

With increasing demands on the hospitals comes the problem of obtaining adequate funds both for maintenance and for necessary capital outlay. Endowments, heretofore adequate, have become entirely insufficient. There was a time when the income from $5,000 would provide the annual maintenance of a free bed in a hospital. To-day, it would last less than two months. Public contributions for the support of hospitals either obtained directly by the hospitals or through community chests have nearly, if not quite, reached their limit. Private philanthropy is very properly sounding a warning. Until recently, when the burden has become too great, private contributors have been willing to bear the burden of the care of the indigent in private hospitals.

If the cost is to be borne by the taxpayer, what will be the best policy for the hospitalization of public charges? Should it be in public hospitals owned by municipalities or should it be in private hospitals on a contractual basis? The answer is that probably both services should be used, but it seems in the interest of most communities that there should be a greater extension of the policy of caring for public dependents in private institutions, the payment for such care to be made on the basis of a reasonable cost. There is no reason why private philanthropy should have to carry the public's responsibility and be out of pocket in doing so. On the other hand a private hospital cannot reasonably expect to make a profit caring for public patients. Everything considered, including the interest on capital investment and necessary maintenance, it is as cheap for a city to contract with private hospitals for ward service as it is to maintain its own hospital.

The Trustee—A Problem

In any given community where there are a number of private hospitals it is undoubtedly true that its people will be distinctly more benefited by distributing public patients to these hospitals than by centering all public medical relief in one institution. A number of centers can thus be maintained, each one having its own medical staff to whom a larger opportunity is made possible by reason of the additional clinical material. This will tend to improve medical practice in the community and to encourage a friendly rivalry in scientific medicine. In larger communities the public hospital of capacity to provide care for only a part of the hospitalization of indigents will have the effect of restricting private hospitals doing public work to reasonable limits, and at the same time the private hospitals will set standards which the public hospital must emulate. In many communities private hospitals look with disfavor on accepting public ward patients, but if the financial burden is borne by taxation it would seem advantageous for the private hospital to do its share in providing care for the indigent. Another point of no small importance is that almost inevitably in public hospitals political activities of various groups, inside and outside, are almost always present to hamper efficiency.

Without in any way wishing to detract from the enormous value of the service rendered by men of affairs and women of standing as members of governing boards of hospitals, I think

one may fairly say that one of the greatest hospital problems to-day is the hospital trustee. There are numerous exceptions, many of them outstanding, but the sum total of ignorance on the part of members of hospital boards, of hospital methods and practice is something that cannot be lightly regarded. Membership on a hospital board should carry for the member a definite responsibility to devote time and thought as well as money to the conduct of the affairs of the hospital. After all, it is directly up to the boards of hospitals whether these hospitals are examples of what they should be or whether they are merely places where the sick are unfortunate enough to be housed. Any hospital executive with a clear understanding of his function and with the ability to perform it need have no uneasiness when the members of his board are interested enough in the affairs of his hospital to inform themselves of its various activities.

The more a trustee really knows about a hospital, the less likely is he to interfere with the running of its machinery and the better will be his understanding of the importance of a competent administrator and the need of the highest type of professional service. If trustees more generally recognized the importance of high class executives, the problem of training them would automatically be solved. The demand would be such that ample opportunity and compensation would be made available and, that being so, there would be no lack of persons interested in hospital administration as a career. In the past we have been too much concerned with the supply of trained executives rather than with the demand for their services.

An Obstacle to Hospital Progress

It is to be regretted that many more hospital trustees are not members of this association and that they are not present at these important conclaves, which offer such convenient opportunities for acquiring information in every branch of hospital activity. I believe if every hospital trustee who regarded his position as a serious trust could clearly understand its advantages, both to himself and to his hospital, he would obtain membership in the American Hospital Association. That there is an increasing interest on the part of members of hospital boards in the association and its work is an encouraging omen.

Closely allied to the problem of responsibility of hospital boards, is the matter of leadership. There is a great need for public education concerning hospital service and all it embraces. The lamentable lack of knowledge of the average citizen of what the hospital is doing and what it stands for is the greatest obstacle to hospital progress. The public is suspicious of the hospital and the suspicion is almost entirely based on ignorance of the problems the hospital must face. Dispel this ignorance and hospitals deserving public support and encouragement will receive it in unstinted measure, and those whose conduct does not entitle them to consideration will either have to raise their standards or close their doors.

The Ever Recurring Question of Costs

Perhaps no problem connected with the care of the sick has received so much public attention as the alleged high cost of hospital and medical service. Indeed the cost seems to cause more public agitation than the question of whether or not people are getting what they pay for. There are kinds of hospital and medical service that are costly at any price; on the other hand if skillful treatment and good care mean restoration to health and happiness, the service may be worth anything it costs. The cost of a necessary and an unnecessary operation may be the same. There is a vast difference in the value. Generally speaking it is unquestionably true that judged by results the value of medical service and hospital care has increased faster than has the cost but we must not ignore the fact that through incompetence of surgeons and inadequacy of care in some hospitals, the mortality rate for many diseases and operations is as high as it was twenty years ago. The value of maternity care when balanced against its cost might raise some question when we know that the mortality rate from puerperal sepsis in this country is about as high as in any country in the world. The value of scientific medicine justifies all its cost when we recall that certain diseases heretofore common, from which there was a large mortality, such as typhoid fever, diphtheria, hookworm disease, have practically disappeared as important causes of death.

Irrespective of the value received the costs of modern hospital care have not increased in proportion to what the hospitals must pay. Again the time spent in hospitals under modern conditions by the average patient is much less than it was twenty or more years ago. The cost of hospital care should not be reckoned so much by the day as by the result. What the individual or the community pays for, say, a case of diphtheria is less than it was before modern methods enabled us to cut short the time of the attack and to save a large percentage of all cases. Recent intensive studies carefully supervised and checked indicate that illness is inevitable and, as stated by Dr. Emil Frankel, director of research, Department

of Institutions and Agencies, Trenton, N. J., is a hazard of life comparable with other hazards. The cost of sickness would not be burdensome if it were distributed. We do not consider burdensome the cost of education or of fire or police protection. Through taxation these costs are distributed. The problem then as far as the cost of sickness is concerned is to distribute the burden in some way and to see that value is received.

Another problem that is causing uneasiness to the public and agitating those responsible for the administration of hospitals is that of nursing, including nursing service and nursing education. The published findings of the Committee on the Grading of Nursing Schools in the now famous book, "Nurses, Patients and Pocketbooks," can hardly be questioned as to the facts found or the conclusions reached. There is an oversupply of nurses but there is no surplus of good nurses. Contrary to general belief, there has not been a real shortage of nurses in the last fifteen years. The problem has not been so much that nursing service was not available as that nursing service could not be adequately distributed where it was needed. There are fewer young women applying as students and there is a growing tendency to discontinue nursing schools, especially those in connection with small hospitals.

The transition from the one type of nursing to the other necessitates a complicated and expensive adjustment. Nursing by graduate specials represents a tremendous waste of professional effort, for it is a conservative estimate that half the special duty nursing to-day is unnecessary. In our readjustment of nursing service in hospitals it is altogether probable that special duty nursing as such will practically disappear. Nursing education essentially is no different as a social obligation from any other kind of professional training. It is a public concern and its cost should properly be borne, as is the cost of other education, by endowment or by taxation.

What Is Amiss?

Perhaps one of the most difficult problems on which hospital administrators and trustees must focus their attention is that of medical service. Hospital administration and medical practice both inside and outside the hospital are so closely interrelated that one cannot consider them apart. With the changing social and economic order there have come new phases of the problem difficult alike for the hospital and the physician to understand. The physician has been an individualist. His social horizon has been limited by the very nature of his calling and the traditions and customs that have become a part of it. It is only in recent years that hospitals have become anything more than places to house the sick or workshops for the physician. Both the hospitals and the medical profession have been handicapped through the lack of knowledge of the public of the scope of their activities. Ignorance, prejudice and half truths have deepened the confusion until one sometimes wonders if the average layman does not consider doctors and hospitals public enemies and if the doctors and the hospitals do not feel that the public is unsympathetic, unintelligent and willfully hostile. It is certainly a time when tolerance, cooperation and knowledge are needed on every hand. The doctors rant about state medicine, health insurance and the prospect of socialism in medicine generally. The public nurses grudges because of alleged unjust charges, commercialism, near trade unionism. Something must be amiss. Just what it is and just how to smooth out our difficulties is difficult to say.

Must the Physician Lose His Halo?

In the past the public has credited the medical profession with the right to wear a halo. The good old doctor was something of a tin god. Now the doctors, as indicated in the address of the president-elect of the American Medical Association last June, want to be paid by the community for service rendered to patients who are charges on the community. Indeed why shouldn't they? Apparently, however, it did not occur to Doctor Morgan that the community will want to have something to say about what it pays for. Practically, Doctor Morgan is asking the public, through taxation, to hire the doctors for public service. If this isn't state medicine, just what do you call it? If the medical profession expects to be paid for its services, to enjoy the comforts and emoluments of the industrialist, to live in the larger centers and to employ assistants to do their night work, they must expect to lay aside their halos. They can't have their cake and eat it too.

As a matter of fact doctors are no different from other men. They have been recognized as members of a learned profession and credited with having had rather exceptional educational opportunities. Nowadays there are those in other walks of life as well educated as the doctors unwilling to accord almost infallible wisdom to the medical profession. The hesitancy of the medical profession in accepting responsibility in the public health movement has resulted in some undesirable public health measures harmful in their effects both to the doctors and to the public and, more important, it has also contributed to

a lack of confidence in the leadership of medicine in matters concerning the promotion of health.

Change is inevitable. Why not then recognize obvious tendencies and work out the best solution that our understanding permits. Whether we like it as a medical profession or not, organization of effort is the order of the day. The physician must become more socially conscious and must recognize more clearly the value of concerted effort. That organized service is more effective and less costly than individual effort is shown by the quality of care received by nonpaying public ward patients in our better hospitals. No one who knows the facts will seriously dispute the assertion that on the whole the average ward patient on staff service the country over receives better care than the average private patient from his individual physician. Why not organize hospital staffs so that the private patient is as well cared for as is his neighbor in the ward? The percentage of autopsies is generally considered one of the best indices of scientific interest on the part of the hospital physician that we have. It would be interesting to compare the percentage of autopsies on ward cases with that on private cases. In all hospitals with which I am familiar the autopsy rate for the wards greatly exceeds that for private rooms.

There can be no real conflict of interest between the hospital and the staff physician; their aims and objectives are similar if not identical. Governing boards must come to a fuller realization that they are trustees not only of hospital buildings but of medical service as well. More interest must be evinced in the accomplishments of the staff, better facilities provided for staff activities and more adequate organization paid for through the employment of officers whose chief duty it is to coordinate the work of individuals and services in better organized effort. The medical needs of a hospital as advocated by a well organized cooperative staff cannot be ignored. The measure of a hospital's efficiency is the character of its medical work. Its medical work cannot be expected to meet the highest standards unless the medical workers are accorded consideration.

A Good or a Bad Omen?

Recent statements of officers of the American Medical Association and of individual members, together with the official proceedings of the Detroit meeting of the association in June, indicate what might almost be called a belligerent interest in the subject of hospital standardization. As the sign of an awakening interest in the need of better medical service in hospitals, this is a good omen. If it is to be interpreted merely as the expression of a desire to dominate a field of usefulness, it is unfortunate. A prominent officer of the American Medical Association is reported as saying, "The American Medical Association is the only organization that represents the entire profession and is, therefore, the only proper organization to establish standards or supervision over things medical in this country." You will all agree that this is a large order.

What Standardization Means

Hospital standardization means an organized effort to improve and perfect hospital service including medical practice in hospitals. It is something that no organization can accomplish alone. Even the American Hospital Association cannot do it all, although we might quite as properly say that the American Hospital Association, being the only one which represents all hospitals, is the only one to establish standardization of hospital activities. We could not do it; we admit it and we cordially invite all other organizations and individuals interested in the improvement of hospital service to come in; there is plenty of room. If we waited for the A. M. A. alone to achieve results we could not exclude from our hospitals members of the association who are abortionists, extortionists or otherwise undesirable citizens.

Now I am not indulging in wild talk. I have nothing against the American Medical Association. I heartily approve of it. I have been a member of it myself continuously for twenty-six years, much longer than I have held membership in this association. Because the hospital is primarily a medical institution, the American Medical Association should be an important factor in hospital development but it cannot be a dictator. It can assist in setting standards but in its very nature it cannot enforce them. It can educate but it cannot compel. The American Medical Association may well say when a hospital is an acceptable place in which to practice medicine but the American Hospital Association may equally well say when a physician is competent to practice in a hospital. The American College of Surgeons, first in the field of hospital standardization, has been an enormous influence in setting high standards. Its primary object, however, is to improve the practice of surgery. Its interest in the program of standardization has been from this standpoint. Its ideals are high but there are still a few fee splitters in the American College of Surgeons.

The American Hospital Association, as evidenced by this notable gathering and those which

have preceded it, is tremendously concerned with the problem of hospital improvement but there are members, institutional and personal, who fall signally short of what they ought to be. There are good doctors outside of the American Medical Association. There are competent and honest surgeons who are not Fellows of the American College of Surgeons. There are splendid hospitals—not many of them—that are not affiliated with the American Hospital Association but a physician's membership in the American Medical Association, the surgeon's fellowship in the American College of Surgeons and the hospital's connection with this association are all what we might call almost prima facie evidence of competence, integrity and leadership.

There are numerous other organizations interested in the standardization of hospitals but in most of the discussion about hospital improvement we somehow forget to mention the one group most concerned of all. It is none other than the long suffering public itself. It is only as the instruments of the public that we appear at all. The public can require standards and enforce their observance, and more and more will be doing so. It is incumbent on us to see to it that the standards are right and practical.

I have touched probably somewhat inadequately but sufficiently perhaps to bring them again to your attention, some of the principal problems that the hospitals of the country are facing to-day. I wish now briefly to consider some of the problems of this association.

What the Association Needs to Do

During a trying period the association has made very definite progress. The report of the board of trustees which you may read at your leisure will perhaps be a sufficient account at this time of my stewardship. There are a good many things we all should like to see done which have not yet been accomplished but it has not been due to lack of interest or neglect on the part of the trustees. One of the activities to which you have committed yourselves and which the board by unanimous vote has favored, at the earliest possible moment is the publication of an association journal. During the last year, however, the association had to assume responsibility for the Hospital Library and Service Bureau hitherto supported entirely outside the association and this has taken all our available funds. The finances of the association are in excellent condition but the trustees, very wisely I think, have felt that they could not at this time properly assume to involve the association in any new venture which would require a large outlay.

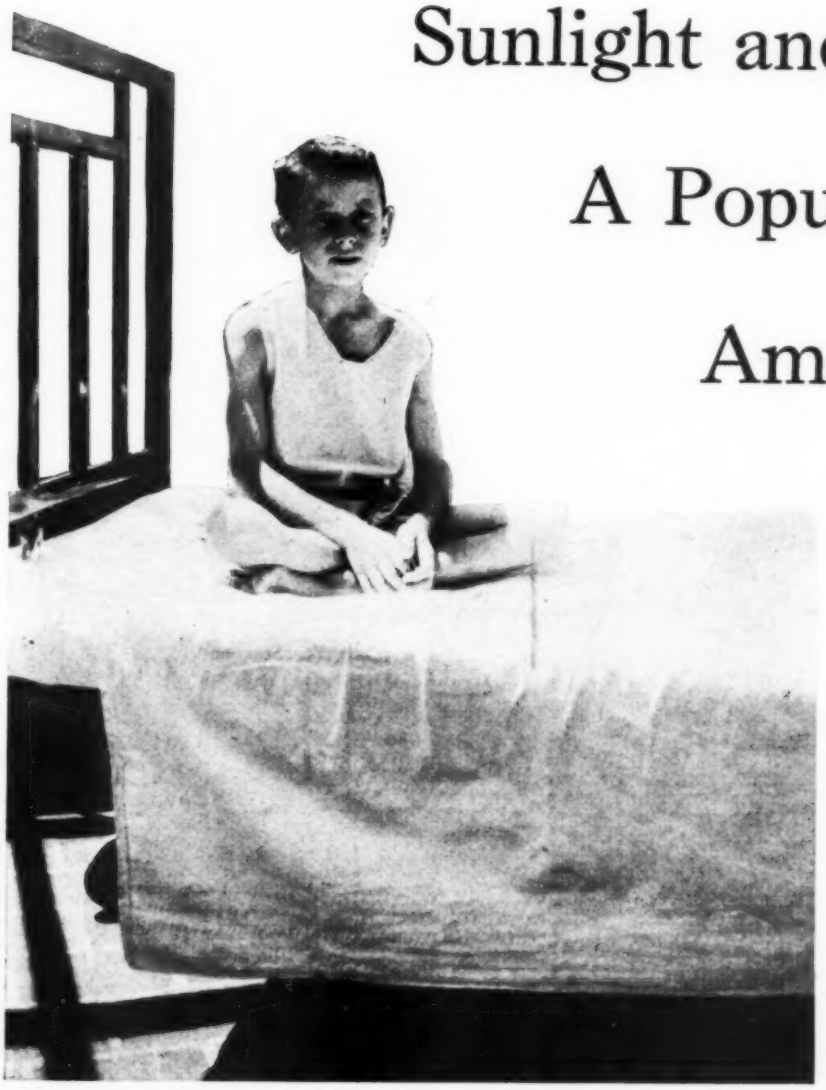
Among the activities in which the association might well engage are a number that would benefit all of the hospitals and hospital people of the country. Important in this list is research, there being a constant demand for information in various fields connected with hospital service. It is distinctly something that should be organized under the direction of the American Hospital Association. The value of the Library could be greatly enhanced, and the Service Bureau, now relatively not much more than a name, could be augmented so that it would become the first thought of anyone who wanted information.

Other Objectives

Offering tremendous possibilities for usefulness are: the classification, examination and approval of equipment and supplies so that certification of the American Hospital Association would assure merchandise meeting definite standards; investigation of methods and procedures in hospitals; the keeping of records and accounts; advice and consultation on building programs and equipment of buildings; advice on matters pertaining to hospital management; community relationships; service to personal members in the many problems that constantly arise; working out definite and practical relationships with other organizations; participation in the program of hospital standardization with various public and private agencies in a multitude of activities which directly or indirectly concern the hospitals. There seems to be no limit to the possible usefulness of the association. There is a limit, however, a very definite one, to the actual service the association can render, both to its institutional and to its personal members and hospitals outside its membership.

Our whole problem can be summed up in one word: money. We already have a large percentage of the possible total institutional membership, and the personal membership is a relatively small body composed largely of those who can pay only nominal dues. We have about reached the limit of our income from membership. Our resources are expressed in thousands; our legitimate needs, if we cover the field of hospital service adequately, can almost be stated without extravagance in millions. Where such tangible and legitimate needs exist, there are always ways to meet them. We must direct our attention to securing from those who desire to be of great service and who have the means to satisfy their desires, sufficient income so that the association can enter a new period of enormous usefulness not only to its members but, indeed, to the hospitals of the world.

Sunlight and Air— A Popular Tonic Among These Children



By

EVA ELLEN JANSON

Superintendent, Children's Hospital, Columbus, Ohio

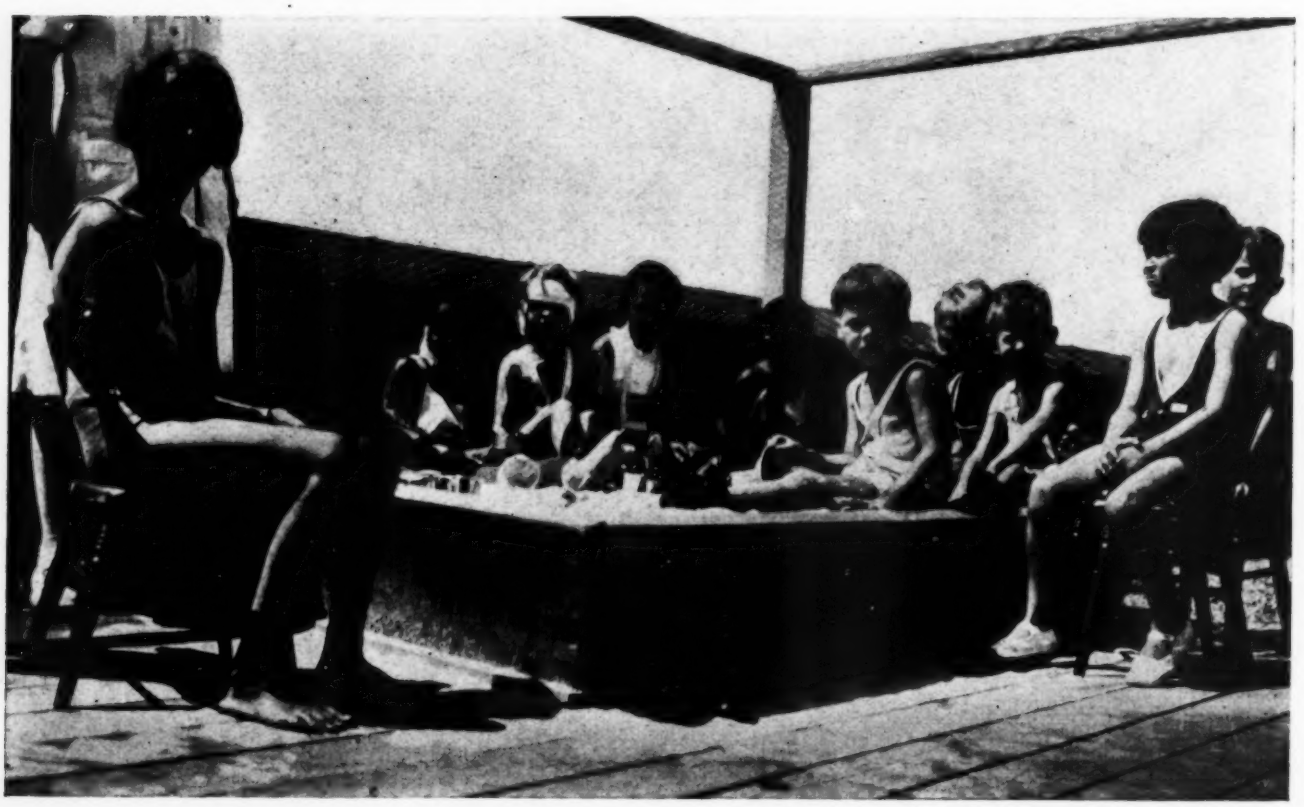
THE Children's Hospital, Columbus, Ohio, has undergone changes, as other hospitals have, in order to help its little patients win back their health.

With the emphasis that is being placed on the beneficial effect of light rays and atmospheric changes in increasing human resistance to disease, the outdoors should be used to the greatest advantage. We have, therefore, this year provided a completely screened in spacious veranda on the second floor of the hospital. The ceiling of the porch is of copper mosquito netting constructed in framed sections so that it can be removed in the Fall, thus preventing any damage from the weight of snow and ice during the winter when it is not needed for protection. Double doors have been installed so that beds, wheel chairs and cripple carts may be conveyed to the veranda without disturbing the sickest occupant. There the children are exposed to the direct rays of the sun, while and at the same time they are protected from insects.

The results of this experiment have been so gratifying that we have found it necessary to provide additional space so that more children could benefit from the treatment. This was accomplished by closing in a section of the roof and transforming it into a roof garden. Although this sounds elaborate, it was in reality effected very economically. A board floor was constructed atop one wing of the hospital and surrounded by a strong wire netting in order to make it safe for the children. Because of the absence of flies and insects on the roof, screening was not necessary. Here, also, beds, wheel chairs and cripple carts may readily be rolled directly from the elevator.

The children are taken to the roof in sun suits and the nurses supervise a play period for one hour each forenoon and afternoon. Only in cases of snow or rain do weather conditions interfere with the daily visits to the porches. When the sun is hot the children are taken out earlier in the morning and later in the afternoon, thus mak-

A patient who has been rolled to a section of the roof garden for a sun treatment is shown above. The lower picture illustrates a play period on the roof, where morning and afternoon the children have an hour of supervised play.



Here, birds, trees, blue sky and fleecy clouds will aid materially in the recovery of this child compelled to wear braces.

One of the young patients of the Children's Hospital, Columbus, Ohio, takes a sun treatment on the roof.

ing it possible for them to avoid the extreme heat of midday.

Children who have been confined to their rooms on account of elevations of temperatures and for other reasons, as a rule are morose and uninterested in their visitors, their toys or their surroundings. When they have been moved to the sun porches where they can play in the sand boxes filled with clean gray sea sand and use the interestingly and colorfully decorated pails and shovels, they seem to acquire new life. The birds that fly over the hospital, the trees, the squirrels in the squirrel houses, the sounds from the park near-by, the clear blue sky and the fleecy clouds all serve to arouse their enthusiasm and to aid materially in their recovery.

Children who have never talked freely, for some reason or other seem to acquire new poise and courage. It is surprising how soon they overcome their shyness and learn to trust us with their secrets.

As they play, each tries to outdo the other. The smaller children vie with each other in filling their sand pails, they write their names with their fingers, they make paper ships colored with bright hued crayons and sail them across the sea of sand. Tables and chairs are decorated with birds and flowers in soft woodland colors. The ends of the seats and benches are in the shape of animals—cats, turtles, ducks, rabbits and one sly little fox—painted in soft greens with trimmings of a brighter hue.

Children who seem perfectly complacent and satisfied with their environment, after one experience on the porches are no longer contented in their rooms. The superintendent can make rounds at almost any hour during the day, always to be met with the pleas of the children to be taken to the roof where they have found interests to divert their minds from illness toward health. As they play, the sun and air make almost miraculous changes in their bodies and spirits. Those who were anemic looking and listless become playful and happy. They gain in weight, and their little bodies take on a healthy glow.

Those who are connected with children's hospitals must understand the child's viewpoint, and seek in every way to promote the mental activity and the day-to-day happiness of the small patient.

Princess Mary Opens Unit for the Study of Puerperal Fever

Princess Mary recently opened the isolation block of the new Queen Charlotte's Maternity Hospital, London, says the *Journal of the American Medical Association.*

The new building will be devoted to the study of puerperal fever which is responsible for a great number of maternal deaths. According to Sir Almroth Wright who described the objects of the building: "Those deaths are not decreasing. The methods tried have not been successful and new ones must be looked for. The problem is not new, as the infection of wounds during the war was never avoided by antiseptics."

Sir Almroth said that for forty years he had been engaged in bacteriologic research in connection with infection and that he had been forced to put up with continual disappointments in attempting to solve this problem.

SUGGESTIONS FOR PHYSICIANS IN THE MEDICAL SERVICE OF AN OUT-PATIENT DEPARTMENT

ONE of the serious shortcomings in medicine and one that rational medicine has constantly to overcome is the ignorance of the lay public in medical lore. For this the medical profession is largely responsible, for its members have fostered ignorance by assuming the medieval ex-cathedra attitude toward their patients. Much of this ignorance may be overcome by the physician assuming the rôle of a teacher as well as that of a healer. Patients, in the medical department especially, require an entirely new knowledge of the rudimentary principles of medicine as they relate to diet, hygiene, preventive medicine, the problems of living and, especially, the fallacy of believing that disease cannot be cured without medicine. For this reason it is urged that after each examination the attending physician should explain the illness to the patient in terms that the patient can understand; for instance, why a certain diet is ordered, why the medicine is given, or, if no medicine is prescribed, the reasons therefor. In the physician's attitude toward patients, kindness is absolutely essential. In this way, each physician will become a nucleus for the dissemination of sound medical thought, and the benefits eventually accruing will be incalculable.

IT is well to remember that medicine is an art as well as a science and in the diagnosis of disease no more should be done than is essential. Expensive methods of examination, such as the making of x-ray pictures or electrocardiograms, should be requested only when the diagnosis cannot be made by clinical methods, or in cases that have unusual interest and in which an exact record would be of scientific value. The physician should do nothing more than he would have done had the patient consulted him in his office; nor should he do any less. There is hardly any need to emphasize that it is in the interest of economy that unnecessary examinations are discouraged.

IT is becoming increasingly manifest that a considerable percentage of all patients are suffering from psychologic disorders. Unfortunately the attitude of many physicians toward such maladies is deplorable, ranging from utter ignorance to sheer hopelessness. If a physician diagnoses a functional disturbance he should not report that the patient has "nothing the matter with him." Such patients often suffer as much as if they had an organic disturbance. If the doctor feels incapable of coping with the affliction, he should consult someone who can. The differentiation and the analysis of the origins of a maladjustment are often among the finest triumphs of the clinician and do much to relieve suffering.

CONSULTATIONS in every situation should be requested in all doubtful cases, not only from the other specialties, but especially from associated members of the clinic.

MEMBERS of the various clinics are reminded that not merely ability but attendance, the accurate keeping of records and general attention to work are carefully scrutinized and that these details are considered in determining future advancement.—ELI MOSCHCOWITZ, M.D., *Associate Physician, Mt. Sinai Hospital, New York City.*

Factors That Influence Ratio of Personnel to Patients*

By MALCOLM T. MACEACHERN, M.D., C.M., D.Sc.
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THE average ratio of nurses to beds in 56 hospitals replying to the questionnaires of the county hospital committee of the American Hospital Association was 0.15 and the range was from 0.02 to 0.54. The committee's report states that, making allowances for the lack of detailed information, "a nurse bed ratio of less than 0.20 in general hospitals . . . indicates a lower standard of nursing service than is usually regarded as desirable in any general hospital, whatever local conditions may be." Ten, or 42 per cent of the 24 general hospitals, fall in this group. And, "It may well be doubted also that a nurse bed ratio of less than 0.10 . . . represents adequate nursing service even in a tuberculosis hospital . . . yet sixteen, or 57 per cent of tuberculosis hospitals are no better equipped." However, 28 of the 56 hospitals state that they employ only graduate nurses. In some cases this may account for the low ratios.

As previously mentioned, Mr. Buck found the average number of graduate nurses per bed to be 0.07. He also found that 38 of the 84 hospitals studied had an average ratio for graduate nurses between 0.04 and 0.07 per bed so that the general average is fairly typical in this instance. The average for student nurses he found was 0.20 per bed and the modal class according to this study was 0.35 to 0.39.

What a California Study Showed

The Community Hospital, Riverside, Calif., has made time studies of its nursing personnel, which are described by Dr. C. Van Zwalenburg, in an article on "How Much Time Does One Nurse Devote to the Average Patient?" in the August, 1929, issue of THE MODERN HOSPITAL. The average number of patients considered in the two months' study was 24.5. At the end of twenty-four hours the supervisor of the nursing unit totaled all the hours that any nurse had served on the unit, including her own time and that of the superintendent of nurses. The average nursing hours per day per patient were found, at the end of the time study, to be 2.78. The average nursing hours, which were 70.8 per day at eight hours, means 8.86 nurses per day of twenty-four hours. Consequently 8.86 nurses for 24.5 patients gives a total of 2.76 patients per nurse.

In addition to the general ratios I have made an analysis of nurse ratios to patients, based on the figures of 1,196 approved hospitals out of the total of 1,266 included in the 1928 list of accredited nursing schools of the American Nurses' Association. As individual figures on daily average patients were given, these were used in computing ratios. The average ratio of nurses to patients for all of the 1,196 hospitals was found to be 0.62, approximately ⅔ of a nurse per patient. The ratios varied from 1.53 nurses per patient to 0.02. The last figure, which is exceptionally low, was for a municipal home and hospital. Of the entire list of hospitals only 83 show a ratio of 1 or more than 1 nurse for every patient.

Ratio of Nurses to Patients

The average ratio of nurses in the hospitals of 25 to 49-bed capacity was 0.80 per patient. Individual ratios ranged from 1.30 to 0.10, the latter in a hospital employing only graduate nurses. In hospitals of from 50 to 99 beds the ratio was ¾ of a nurse per patient, with a range of 1.52 to 0.07. The low figure again is in a hospital employing only graduate nurses. Out of the 1,196 hospitals analyzed 592 fall in the classification of 100 to 249 beds, and for this large group the average ratio of nurses to patients was 0.65. The high figure is 1.53, already referred to, and the low figure, 0.06, is shared by three hospitals, all of which employ only graduate nurses. For hospitals with a bed capacity of from 250 to 499 the average ratio is 0.54 or 1 nurse to every 2 patients, with individual variations from 1.07 to 0.10 per patient. The 40 hospitals with 500 beds and over have an average of 0.39 per patient, the high and low ratios being 1.01 and 0.02.

As the employment of graduate nurses seemed to have a direct influence upon the ratios, an average ratio of nurses to patients in those institu-

*Part 2 of an article by Doctor MacEachern on the ratio of personnel to patients. Part 1 appeared in the October issue.

tions using only graduates was obtained and found to be 0.17, considerably below the general average for hospitals employing a combination of graduates and students. Just as surprising was the discovery that only 22 hospitals of the entire list of 1,196 employ graduates to the exclusion of student nurses. The range for these 22 having graduates was 0.06 to 0.50. Excluding this last high figure the range is from 0.06 to 0.38, approximating the range of 0.02 to 0.31 obtained by Mr. Buck.

Graduate Nurses Reduce Nursing Personnel

The analysis of 1,196 hospitals shows that the proportion of nurses required for each patient decreases as the size of the hospital increases. The average ratio of hospitals under 50 beds, for example, is 0.80; in hospitals of 50 to 99 beds it is 0.74; in hospitals of 100 to 249 beds it is 0.65; in hospitals of 250 to 499 beds it is 0.54; while the ratio in hospitals of over 500 beds drops to 0.39. This analysis also substantiates the general opinion that a pronounced reduction in nursing personnel is made possible by the employment of graduate nurses solely.

While the intern is not considered as a pay roll employee in the hospital, the ratio of interns to patients merits consideration. The 84 hospitals surveyed by Mr. Buck were found to have an average ratio of 0.02 or 1 intern per 50 beds. The range was from 1 per 100 beds to 1 for 14 beds.

The total capacity of the 628 hospitals approved by the council on medical education and hospitals of the American Medical Association for intern training, according to figures of November 30, 1929, is 182,895, and these hospitals have available 5,262 internships. On this basis the ratio would be 0.03 per bed, but it is probably lower in view of the existing shortage of interns. Another factor is the employment of resident physicians in place of interns.

In its "Essentials in a Hospital Approved for Interns" the council on medical education and hospitals states that the ratio of patients to interns should be at least 25 to 1. Using the 195 statistical reports previously mentioned as a basis, the following data on interns have been secured: Only two of the 25 hospitals in Group 1 employ interns. As these two hospitals listed but one intern each the general proportion was only 1 to 370 patients. In the 50 hospitals in Group 2, those with from 50 to 99 beds, there was a total of 30 interns; 39 of these hospitals reported no interns at all, and 2 had as many as 6. The ratio is 1 to every 86 patients. In Group 3, hospitals of 100 to 249 beds, there were 138 interns reported, making a general ratio of 0.01 per bed or 1 intern for every 50 patients. Thirty-three of these hospitals had at least 1 intern and 21 of them had between 3 and 5 interns. One hospital had an intern staff of 12, a ratio of 0.06 per bed. A total of 393 interns was listed for Group 4, hospitals of 250 to 499 beds, a ratio of 0.02 per bed or 1 to 33 patients. Thirty-seven of these hospitals had 5 or more interns. The highest ratio was 0.09 per bed. Only 2 hospitals reported having no interns, and one of these had three resident physicians instead of interns. The average ratio for 19 of the 20 hospitals in Group 5 is 0.03 per bed or 1 intern for every 25 patients. (One hospital was omitted from the computation as the number of interns was included in the resident staff.) All except one hospital employed interns and 12 had 20 or more. The highest ratio was 0.08 per bed. Three of these hospitals reported 8 resident physicians each, and one had 9 residents in addition to interns.

From this study it seems that the number of interns per bed increases proportionately with the size of the hospital. The hospitals with less than 100 beds employ a negligible ratio of interns per patient and usually have a resident physician. It is generally agreed, however, that the average hospital should have 1 intern to 28 patients. In an open hospital this is frequently much lower, that is, 1 to 35 or 40 as a maximum.

In consideration of the ratio of dietitians and food service employees to patients, Maude Perry, formerly dietitian, Montreal General Hospital, in a study of 66 hospital kitchens reported that hospitals having between 1,000 and 2,000 beds had a range of from 1 to 8 dietitians; those between 500 and 1,000 beds had from 1 to 9 dietitians; those from 250 to 500 beds had 1 to 15 dietitians; those from 100 to 250 beds had 1 to 3 dietitians, while hospitals of less than 100 beds had 1 dietitian. She points out that hospitals of 250 to 500 beds are seemingly better staffed in this department than larger or smaller hospitals.

Katherine Mitchell Thoma, dietitian, Michael Reese Hospital, Chicago, indicates that a fair average is 1 dietitian for 50 to 75 patients.

Dietitians Required in 195 Hospitals

My study of the ratio of dietitians, based on the 195 approved hospitals, showed the following:

25 hospitals in Group 1 had an average ratio of 0.009 per patient.
50 hospitals in Group 2 had an average ratio of 0.01 per patient.
50 hospitals in Group 3 had an average ratio of 0.01 per patient.
50 hospitals in Group 4 had an average ratio of 0.008 per patient.

20 hospitals in Group 5 had an average ratio of 0.009 per patient.
35 hospitals in Group 2 had at least 1 dietitian.
47 hospitals in Group 3 had at least 1 dietitian and 9 had 2 or more dietitians.
45 hospitals in Group 4 had at least 1 dietitian and 26 had 2 or more dietitians.
All in Group 5 had at least 1 dietitian, and 19 had 2 or more.

Ratio Is 1 Dietitian to 111 Patients

Taking this group as a whole the general ratio is about 1 dietitian per 111 patients. Each of the given groups approximate this ratio, though Groups 2 and 3 would seem to be somewhat better staffed, having an average of 1 per 100 patients.

The study of the 195 approved hospitals showed that no hospital under 50 beds employed social workers and that only 2 of those with 50 to 99 beds had social workers; 17 hospitals, however, in the next group of 50 had at least 1 trained social worker, and 1 reported as many as 5. The average ratio is 0.004 per patient or 1 to every 250 patients. Twenty-three of the hospitals with 250 to 499 beds have at least one social worker and 4 have as many as 8 each; 1 reported 11 social workers. The average ratio here is 0.006 per patient or 1 to about every 175 patients. Of the 20 hospitals in the last group 17 have one or more social workers, and 1 reported 22. The general average is 0.008 or 1 to 125 patients.

From these data it seems that few hospitals under 100 beds employ social workers, while those over 100 beds show a corresponding increase in ratio of social workers as the bed capacity increases. I believe that there should be one social worker for every 150 to 200 patients in a hospital for free, part-pay and pay patients.

Adjunct nursing personnel usually includes orderlies, nurse maids and men and women attendants. These are sometimes known as ward attendants or aids. Mr. Buck estimates the ratio for attendants, based on his study of 84 hospitals, to be 0.02 per bed or 1 for every 50 beds. Dr. S. S. Goldwater, New York City, in his recommendations for ward planning, advises 1 orderly to a male ward and says that a hospital caring for the acutely sick requires the assignment of at least 2 responsible persons to a ward.

In the study of 195 approved hospitals the ratio of adjunct nursing personnel is as follows:

Hospitals of
25 to 49 beds, 1 to every 33 patients
50 to 99 beds, 1 to every 25 patients
100 to 249 beds, 1 to every 25 patients
250 to 499 beds, 1 to every 25 patients
500 beds and over, 1 to every 25 patients

From investigations of these 195 hospitals and from personal observation I have found that, generally speaking, there is need for 1 orderly or male attendant to every 35 patients, or 1 for every 25 to 30 patients by day and 40 to 50 by night. In general, every hospital could utilize 1 female or ward attendant for each 15 to 20 patients. This has a definite bearing on nursing personnel.

The degree of time that the radiologist devotes to the hospital, as well as the character and amount of work passing through the department has an important bearing on the number of persons required adequately to staff the x-ray department. Hospitals doing a large amount of major and time-consuming x-ray work, such as gastric and intestinal series, gallbladder visualization and pyelography, will require more personnel than the hospital carrying on routine x-ray work of which the major portion is of a skeletal nature. Further, the addition of work from the out-patient department and from doctors in private practice will have a material effect on the number of personnel required.

Staffing X-Ray Departments

A careful and extensive study of the personnel required for x-ray departments in various sized hospitals has been made by Dr. E. S. Blaine, director of the department of x-ray, National Pathological Laboratories, Chicago. He has offered some valuable suggestions pertaining to this subject which may be followed as a sound basis in working out the personnel for hospital x-ray departments. He states that there is a noticeable trend towards the selection of a part-time chief roentgenologist of high calibre in both large and small hospitals, in place of a full-time man of less experience. The appointment of a part-time roentgenologist will probably mean the employment of one or more additional persons less highly experienced to do routine work in the department. This is desirable, however, for a competent roentgenologist is too valuable to be compelled to take over the duties of a technician. The following is a summary of Doctor Blaine's recommendations for staffing the x-ray department of the average general hospital, in which there are both medical and surgical cases:

Less than 50 beds—1 part-time chief roentgenologist
1 part-time technician
50-75 beds—1 part-time roentgenologist
1 part-time technician
1 part-time stenographer
75-100 beds—1 part-time roentgenologist
1 half-time technician
1 part-time stenographer

100-125 beds—1 part-time roentgenologist
1 full-time technician
1 half-time stenographer

125-150 beds—1 quarter-time roentgenologist
1 full-time technician
1 half-time stenographer

150-175 beds—1 quarter-time roentgenologist
2 full-time technicians
1 half-time intern
1 full-time stenographer

175-200 beds—1 half-time roentgenologist
2 full-time technicians
1 full-time intern
1 full-time stenographer

200-250 beds—1 half or full-time roentgenologist
2 full-time technicians
1 full-time intern
1 full-time nurse
1 full-time stenographer

250-300 beds—1 half or full-time roentgenologist
1 full-time assistant roentgenologist
2 full-time technicians
1 full-time intern
1 full-time nurse
1 full-time stenographer

300-400 beds—1 half or full-time chief roentgenologist
1 full-time assistant roentgenologist
1 full-time student roentgenologist
3 full-time technicians
1 full-time intern
1 full-time nurse
1 full-time stenographer

400-500 beds—1 half or full-time chief roengenologist
2 full-time assistant roentgenologists
1 full-time student roentgenologist
3 full-time technicians
1 full-time intern
1 full-time nurse
2 full-time stenographers

500-750 beds—1 full-time chief roentgenologist
2 full-time assistant roentgenologists
1 full-time student roentgenologist
4 full-time technicians
1 full-time intern
1 full-time nurse
2 full-time stenographers

750-1,000 beds—1 full-time chief roentgenologist
2 full-time assistant roentgenologists
1 full-time student roentgenologist
5 full-time technicians
1 full-time nurse
2 part-time interns
2 full-time stenographers

1,000 beds and over—1 full-time chief roentgenologist
3 full-time assistant roentgenologists
2 part-time student roentgenologists
6 full-time technicians
2 full-time nurses
3 full-time interns
3 full-time stenographers

It will be noted that Doctor Blaine has made provision for the training of interns and student roentgenologists, who, of course, will carry their share of the technical work so that they may be justly considered as personnel.

The factors mentioned when considering the personnel of the x-ray department apply equally well to the clinical laboratory and need not be repeated. An exhaustive study of personnel required adequately to staff the clinical laboratory in the various sized general hospitals has been made by Dr. J. J. Moore, director, National Pathological Laboratories, Chicago. At my request he has submitted the following carefully worked out schedule for staffing the clinical laboratory of the average general hospital:

Less than 50 beds—Visiting pathologist who would call for a short time once a week or once every two weeks, the pathological material to be sent to him daily for examination
1 technician, capable of assisting in other departments when her time is not fully occupied in the clinical laboratory

50-100 beds—Visiting pathologist who would call for a short time daily, or at least three times a week
1 full-time technician
1 part-time intern

100-200 beds—1 part-time pathologist
2 full-time technicians
1 full-time intern
1 part-time stenographer
200-300 beds—1 half-time pathologist
3 full-time technicians
2 full-time interns
1 half-time stenographer
300-500 beds—1 full-time pathologist
1 full-time assistant pathologist
5 or 6 full-time technicians
3 full-time interns
1 full-time stenographer
500-1,000 beds—1 full-time director as head of laboratories
1 full-time assistant director as head of pathological department
1 full-time assistant director as head of the serological and bacteriological departments
2 to 4 full-time technicians in each department
4 full-time interns
2 full-time stenographers
1,000 beds and over—1 full-time director as head of laboratories
1 full-time assistant director as head of the pathological department
1 full-time assistant director as head of the serological department
1 full-time assistant director as head of the bacteriological department
An adequate number of technicians in each department
4 to 5 or more full-time interns
3 or more full-time stenographers, as required

As hospitals over 100 beds have interns, Doctor Moore feels that they could be considered as laboratory personnel and could do the following work: surgical service—examination of tissues, both macroscopically and microscopically, for operations at which they assist, under direction of the pathologist; medical service—perform all laboratory service on their patients other than preliminary laboratory work performed by the technician and that done in combination, such as blood chemical determinations.

The number of technicians required depends on the extent to which the laboratory is used. The above suggestions are for the average hospital where the physicians on the staff use the laboratory to the required extent. This presupposes that the necessary work for approved hospitals is a routine procedure.

Careful study of a large physical therapy department over a period of years has convinced me that 1 attendant or aid, with the usual variety of treatments and with up-to-date facilities, cannot adequately care for more than 15 or 16 patients per day. This statement is borne out by figures submitted through Dr. John S. Coulter, assistant professor of physical therapy, Northwestern University, Chicago. "One physical therapist, attendant or aid to take care of sixteen patients as a maximum," is the recommendation of Doctor Coulter. He explains that this is on the basis of an eight-hour day in general hospitals, with an alternating schedule of heat, massage and exercise.

Here, also, the type of case must be taken into consideration, as well as the volume of work from in and out-patient departments of the hospital. Further, there is a considerable difference in the character of treatments, some consuming much more time and energy than others. All these factors have an important bearing on the ratio of personnel to patients.

Number of Telephone Operators Needed

It is stated that the regular telephone operator working eight hours a day in a hotel carries 100 to 150 local calls an hour with ten trunk lines. This ratio will obtain to practically the same extent in hospitals, providing the operator is not obliged to handle patients' information. Possibly an operator for every 150 to 200 patients in the average hospital might be adequate. From a survey of hospitals it seems that 1 operator for this number of patients appears to be the general ratio.

On inquiry, I find that the largest hotel in Chicago has for its housekeeping department a definite ratio of 1 chambermaid for every 17 rooms. In addition, 1 bathmaid takes care of the 17 rooms and 1 houseman who does the vacuum cleaning takes care of 25 rooms. For this 3,000-room hotel 210 day maids, 42 night maids and 25 housemen are employed. As the majority of good hotels have a ratio of 1 employee for every room, which is comparable to the ratio per patient in many hospitals, the foregoing figures may also serve as a guide for the housekeeping department of the hospital.

For the hospital of less than 50 beds, 1 janitor should be able to handle all work having to do

with upkeep of the buildings, maintaining the heating plant and doing minor repairs. The hospital of 50 to 100 beds will require 1 or 2 helpers for routine work, in addition to a janitor. If an engineer is employed to replace a janitor the former can be expected to undertake most of the minor repairs and simple construction. The hospital of 100 to 250 beds will have a considerable increase in its engineering and maintenance staff. For this group the recommendations made by Edgar Charles Hayhow, formerly of the department of management, New York University, may be taken as a guide. He advises that the personnel be as follows: 1 engineer to supervise plumbing, electrical and construction repairs; 1 assistant helper; crew of 2 or 3 helpers to cover twenty-four-hour service; 1 handyman to assist in daily routine; 1 or more full-time painters. The hospital which approaches 250 beds in size will probably also need an additional handyman, an extra helper or two, and possibly a carpenter. A supervising chief engineer and two licensed assistants are required for the hospital of 250 beds and over, according to Mr. Hayhow. In addition, 2 plumbers, 1 plumber's helper, 1 electrician, 1 refrigeration man, and several carpenters, handymen and painters are required. The number of personnel, particularly in the larger hospitals, will vary with the arrangement and age of the buildings and the type of mechanical equipment. A saving in personnel in this department does not always mean economy to the hospital, for regular repairs are necessary.

What A. C. of S. Study Showed

A survey of a cross section of hospitals on the approved list of the American College of Surgeons revealed a personnel ratio of 9 employees to every 10 patients. While few comprehensive surveys have been made of the ratio of personnel to patients, the consensus among hospital authorities is that there should be at least 1 employee for every patient. On this basis the figures that I obtained fall short of the desired mark, but it should be borne in mind that the hospitals were chosen not with the idea of substantiating an opinion but rather to reveal conditions in the various types of institutions. From personal observations of service to patients in hospitals throughout the United States and Canada I feel that the general hospital handling acute cases should have 1 or more than 1 employee per patient. Hospitals that have made names for themselves through offering the highest type of care to the sick usually have a ratio of at least 5 employees to every 4 patients, and generally 3 employees to every 2 patients. However, when the ratio becomes 2 employees to every patient cost to the patient is materially increased, hence such a policy has its drawbacks.

The study of these 195 hospitals revealed a range of 0.18 to 2 employees per patient. This wide variation demonstrates that an average obtained from a study cannot be taken as a standard for all hospitals in determining the proper ratio of personnel to patients. The difference of minimum and maximum ratios simply indicates that because so many factors influence the number of employees needed, each hospital is a law unto itself so far as staffing it is concerned. How, then, shall the number of employees needed in proportion to the number of patients be determined, some hospital executives may ask. The answer is—carry out a work load study. Put each department and each division of each department under scrutiny to determine the minimum number of persons required to complete a given task adequately.

Such a work load study cannot be completed in a month or even in several months. It should be a continuous process, in that records of the number of patients and the number of persons employed in each department should be kept up to date. Then when the time study figures of the number of employees needed for a brief period are compared with the actual number employed over a long period of time, one can strike an average ratio of personnel to patients that will be accurate enough for all practical purposes.

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A New Clinic That Helps Modernize an Old Hospital

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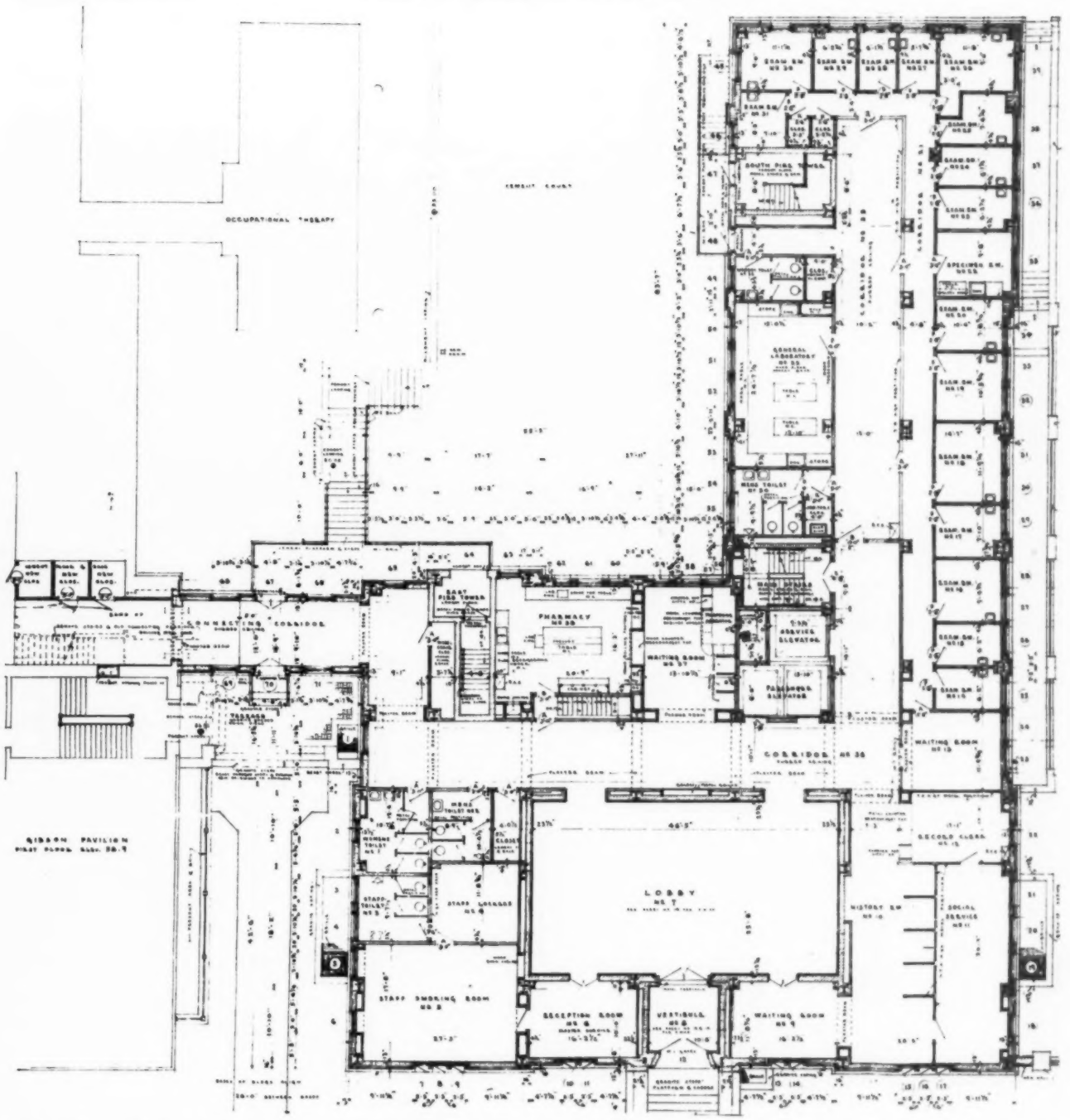
INTEREST in hospital construction in this country has largely centered in the planning and building of complete new hospitals or at least of complete new units. This is natural in a rapidly growing wealthy country with urgent need of hospital facilities.

Even more difficult than the planning of new hospitals is the remodeling of older institutions whose slowly developed plants are too valuable to be scrapped and yet are old enough to need many additions and adjustments to meet modern needs. Sometimes such a hospital's needs can be supplied by minor alterations; in other instances a new unit, a private pavilion, for example, may be adequate. More often, however, the needs are too varied and numerous to be met in these ways.

This was the situation at the Hospital of the University of Pennsylvania, Philadelphia, and it has been successfully met. A nine-story million dollar addition was built, not for a single purpose but to supply as far as possible facilities for the modernization of certain parts of the hospital, especially the medical clinic. Among these needs were: a morgue and autopsy department; a pharmacy; space for the medical out-patient department and its many special subdivisions; offices for certain members of the medical staff who had volunteered to center their activities in the hospital; a medical record room; a hospital library; space for the laboratories doing the routine serologic, bacteriologic, chemical and other laboratory work for the hospital, which constitute the William Pepper Laboratory of Clinical Medicine; space for the newly founded Robinette Department, including a new electrocardiographic station; space for the newly founded Johnson Department of Medical Physics; space

The Martin Maloney Memorial Clinic of the Hospital of the University of Pennsylvania, Philadelphia, is of modern Gothic architecture. The exterior, of red brick trimmed with red terra cotta and Indiana limestone, shows the pleasing arrangement of the numerous window spaces necessary in a building of this type.



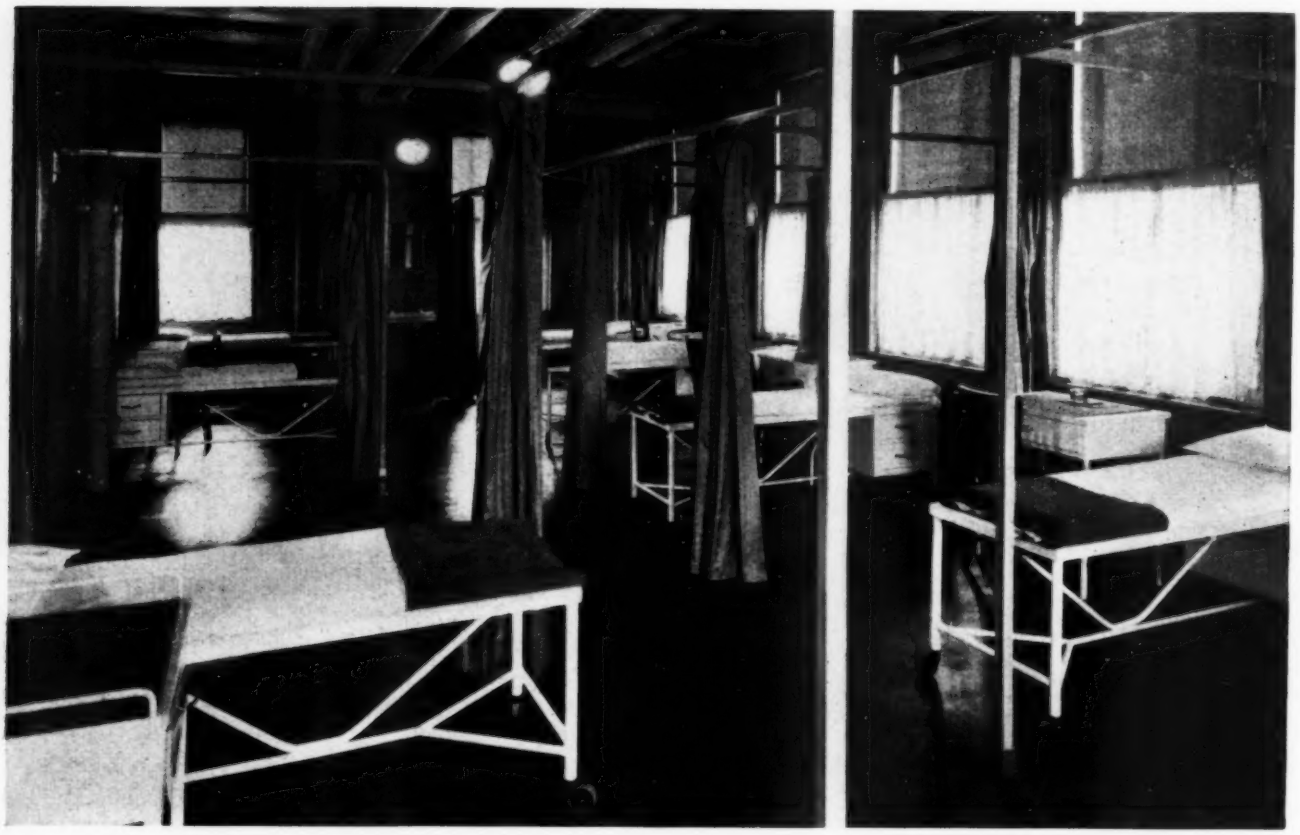
This plan of the first floor of the new clinic shows the location of the medical out-patient department, which consists of seventeen examining rooms and a clinical laboratory.

for the Musser Department of Research Medicine; space for the physiotherapeutic department; additional private rooms; space for the animal house including kitchen and operating rooms.

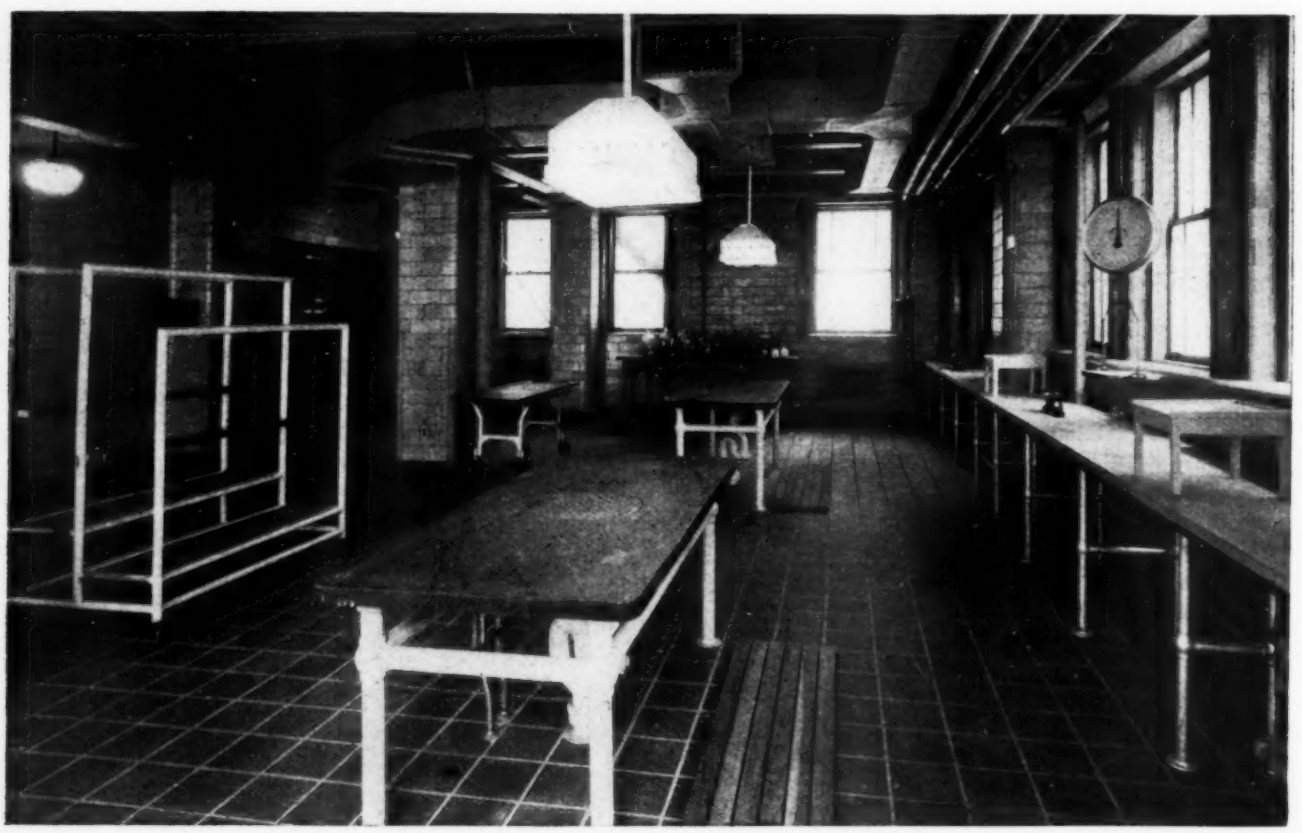
It will be readily seen that the inclusion of such miscellaneous services imposed great difficulties on the architect and the engineer for the new building.

To make way for the new building the thirty-two-year old Pepper Laboratory of Clinical Medicine, the first laboratory of its kind in this country, was demolished, making available a plot of ground 128 by 158 feet. On this area the Martin Maloney Memorial Clinic was erected.

The architecture is modern Gothic, and by facing the exterior with red brick trimmed with red terra cotta and Indiana limestone and by using granite for the base an attempt was made to produce an effect that would not be dissimilar to the adjoining dormitories on the west and the other final units of the hospital on the east. Many compromises had to be made, as for example, the provision of extensive window spaces demanded by the laboratory floors and the connection of the floors as far as possible with the existing hos-



A view of the gastro-intestinal clinic on the third floor is shown in the picture above. The autopsy room, in the basement, has three autopsy tables and ample wall tables, for various purposes. It is shown below.



pital levels. The accompanying photograph shows the pleasing result that has been achieved.

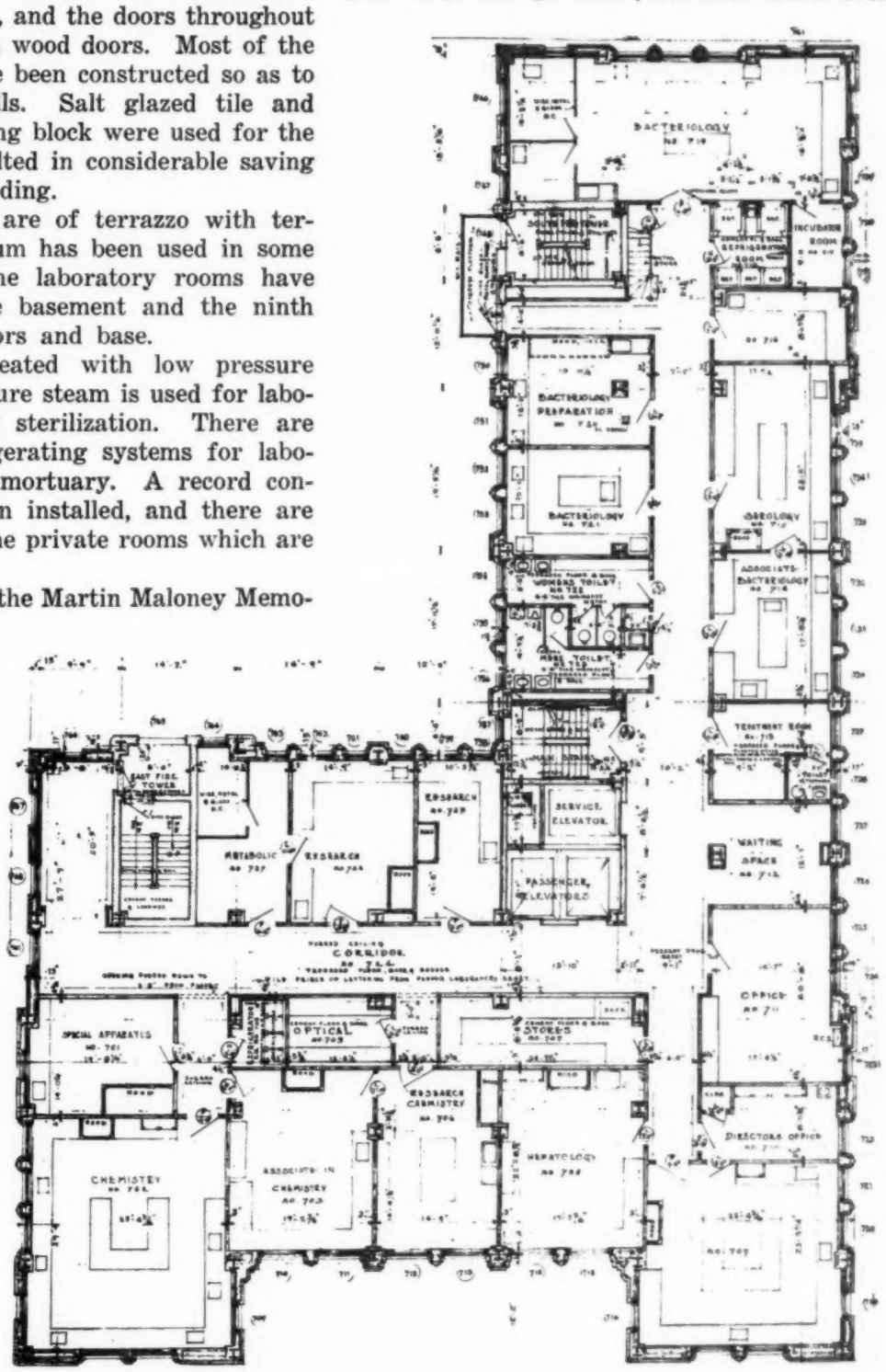
The entire structure is fireproof, and the foundations rest on concrete caissons. The frame of the building is structural steel with cinder concrete fireproofing and floor arches. The inside finish of the building varies considerably on the different floors in accordance with the purposes to which the floor is put. In general, however, the door openings are framed with combination metal jambs and trim, and the doors throughout are flush-type hospital wood doors. Most of the laboratory rooms have been constructed so as to eliminate plaster walls. Salt glazed tile and smooth painted building block were used for the partitions. This resulted in considerable saving in the cost of the building.

Most of the floors are of terrazzo with terrazzo base and linoleum has been used in some of the corridors. The laboratory rooms have maple floors, and the basement and the ninth floor have cement floors and base.

The building is heated with low pressure steam, and high pressure steam is used for laboratory work and for sterilization. There are ventilating and refrigerating systems for laboratory work and the mortuary. A record conveyor system has been installed, and there are radio connections in the private rooms which are on the fourth floor.

The construction of the Martin Maloney Memorial Clinic was started in September, 1928, and was finished on September 1, 1929.

In the basement are the autopsy room and morgue. There is no amphitheater. Instead, there is space for three autopsy tables, with ample wall tables for various purposes. Adjoining are a research room, a private autopsy room, a waiting room, a small clinicopathologic conference room and the undertakers' room. The pharmacy, storage rooms, students' locker rooms,



The William Pepper Laboratory of Clinical Medicine occupies the whole seventh floor, a plan of which is shown here. Facilities for all kinds of bacteriologic chemical and serologic work are provided.

mechanical equipment and toilets are also in the basement.

The main entrance opens into a dignified lobby on the first floor, with a reception room, a smoking room and toilets for the staff opening off the lobby. Out-patients are routed from the lobby past the social service desks and rating desk to the medical out-patient department which occupies most of this floor. Fortunately, the strict observance of an appointment system obviates the need of large waiting space. In the medical out-patient department are seventeen examining rooms and a clinical laboratory The remaining space on the first floor is devoted to the dispensing room of the pharmacy which communicates by its own inside stairway with the basement.

The second floor houses four special divisions of the out-patient department, those devoted to allergy, chest, thyroid and metabolism work. The medical record room is on this floor and is connected with the various floors and units by a record conveying compressed air system.

Special Service on Third Floor

The Robinette Department, which includes the cardiovascular section of the out-patient department, is on the third floor, as is the gastro-intestinal section. In conjunction with these there are a fluoroscopic unit and a clinical laboratory. The private offices of the chief of clinic and the assistant chief of clinic and the library are on this floor.

Twenty-two private rooms occupy the fourth floor, which is on a level with the private patient floor of the old hospital and in communication with it. These rooms are available to patients of any member of the staff and are priced at from $9 to $18 a day. Later, several of these rooms will be supplied with filtered air.

Above the fourth floor the character of the building changes. The fifth floor is occupied by the physiotherapy department. Here duplicate equipment is provided, one set for private patients, the other for ward and out-patients. By necessity, the electrocardiographic station and the routine laboratory are placed on this floor.

The sixth floor is wholly filled by the department for medical physics established by Eldridge R. Johnson. This department is almost unique in its purpose, equipment and location within a hospital.

The Pepper Laboratory has more space at its disposal on the seventh and part of the eighth floors than it formerly had in its original building. Its facilities will be greatly increased in various ways in its new quarters. The remainder of the eighth floor is devoted to the Musser Department of Research Medicine.

Few realize the extensive space needed for animal quarters in a modern hospital. In this building the entire ninth floor is given over to this purpose. Kitchens, operating rooms, research rooms, cage rooms and a soundproof outdoor runway are included. On the penthouse level there is of course the necessary machinery, but space was also found for a squash court.

In the lobby, smoking room, offices, physiotherapy department and private floor no expense was spared in regard to internal finish. All ceilings were furred. Elsewhere, the plainest, most inexpensive materials were used, hollow tile and exposed piping, for example.

One further aspect of such a building must be mentioned. The space vacated in the old hospital by the various units having been moved into the new wing has permitted alterations that have resulted in another group of greatly needed improvements—a new surgical out-patient department, a new telephone central, more space for the social service department and many other changes that could not have been accomplished without some new construction.

The funds for the building were contributed by the late Marquis Martin Maloney and by his family after his death, by Eldridge R. Johnson, Edward B. Robinette and many others.

The architects for the new building were Tilden, Register and Pepper, Philadelphia. Much help was received from Dr. S. S. Goldwater, New York City, and Dr. George O'Hanlon, superintendent, Jersey City Hospital, Jersey City, N. J., both of whom studied the whole problem of the future expansion and modernization of the hospital. The construction managers were Day and Zimmermann Engineering and Construction Company.

New Regulations for Handling and Storing X-Ray Films

"Regulations for the Storage and Handling of Photographic and X-Ray Nitrocellulose Films," is the name of a pamphlet issued recently by the National Board of Fire Underwriters. The pamphlet is a revision of the edition of 1925.

A preliminary note to the regulations points out that the revisions incorporated involve no change in fundamental principles since the 1925 edition. They consist rather in a strengthening of the regulations in the light of recent fire experience and test data, and the amplification of certain details.

One of the principal changes made is in the requirements for venting, which have been substantially increased.

Before and When Work Begins on the New Hospital*

By FRANK E. CHAPMAN
Director of Administration, University Hospitals, Cleveland

IN GENERAL, there are three types of hospital building—the pavilion, the semipavilion and the block plan. Before the type of building is decided on, it is necessary to compute within a reasonable degree the size of the immediate plant and its ultimate future development. The question must be answered as to whether or not future extensions are to be vertical, horizontal or by means of additional buildings. Is the hospital, in its immediate building program, to develop all of the secondary buildings that are a requisite of the completed hospital plan, or are these buildings, such as the nurses' homes, the domestic buildings and the service buildings of various types, to be projected at a future date? If so, where are they to be placed?

There is then the necessity of considering the size and general environment of the site that has been selected and, by a process of study, determining the location of the buildings to be built in this stage of the development, with a fairly sound plot plan of future development.

Orientation Is Important

Thought must be given to orienting the buildings. This is a point that is seldom given consideration, as is evidenced by existing buildings improperly located with reference to sun travel.

If the institution is to be a multiple building type, care must be taken to provide adequate courts not only for the elimination of extreme shadow pockets, but to ensure proper ventilation at all times.

Are outdoor treatment facilities to be provided in the form of porches or by means of a roof garden?

What are the means of ingress and egress? These must be adequate, but at the same time they must be kept to a minimum. In this connection care should be taken to provide completely detached exits for the service and for the mortuary.

How are visitors to be handled? Are the private, semiprivate and ward visitors to be controlled through one entrance, or are separate entrances to be developed for their care?

How is the personnel to be controlled? This may seem a minor problem, but as a matter of fact it is a major operating problem. In this connection, it is desirable to suggest the control of the entire property by means of a proper enclosure such as a fence or a wall with a definite control of all exits.

Determining the Type of Building

As a general statement, the type of building and its general contour are based largely upon the type of nursing unit to be developed. Early in the program, therefore, it is necessary to determine the character of the nursing service.

How many patients are to be assigned to a given nursing unit? There is a reasonable basis for a minimum and a maximum number of patients, irrespective of the type of facility they occupy. This number should be fairly well established early in the program.

What is the ratio of private and multiple bed units? Is the institution to be one caring primarily for private patients or is it to have three general types of service—private, semiprivate and ward? A determination of the percentage of total occupancy to be provided under each of these groups is essential.

Are nursing services to be rendered from a series of properly placed utility rooms or is each bed to have individual utility facilities immediately adjacent thereto?

What proportion of rooms should have baths and what proportion should have individual toilets?

What is to be the type of medical practice in the institution? Is it to be a general hospital treating all types of acute diseases, with certain exceptions, such as contagious and mentally deranged cases?

What is the obstetrical problem in the community, and to what degree will the hospital render maternity service?

Shall there be a pediatric service and, if so, how extensive shall it be?

*This is the second of three articles by Mr. Chapman on the development of the hospital building program.

What is the need for an isolation suite, and how will it be used?

Is there to be a large industrial occupancy and are special facilities provided for the care of such cases?

Upon what basis is the x-ray department to be operated? Is the department designed only to handle hospital work, or is an attempt to be made to stimulate a large ratio of ambulatory referred work?

Planning Laboratory Facilities

A well conceived and well operated community hospital of necessity must be a medium of stimulation to scientific medicine, and the most potent means of stimulation is the development of adequate laboratory facilities. At the same time, it is self-evident that the development of laboratory facilities beyond the demands of the clinical staff is not only economically unsound but will be productive of no lasting good to the institution. There is, therefore, the necessity of fairly accurately evaluating the demands of the potential clinical staff so that laboratory facilities may be planned to meet their needs.

Shall the new hospital furnish facilities for examination and treatment of private patients by members of its staff, and if so to what degree? There apparently is a growing need for examining rooms for the use of members of the staffs of hospitals. A determination of the extent of this demand is essential.

What is the need for the electrocardiogram? What is the need for the special metabolism laboratory? These questions can be answered by the clinical staff, and only by them, and it is incumbent upon the new hospital to plan its buildings to meet that need.

In evolving a philosophy of plan for the contemplated institution, it should be emphasized that the one important thing to be striven for is flexibility of buildings. There is no one so omnipotent as to anticipate changing hospital needs. With an expectancy of not less than thirty-five years of use, many new demands must be met. The changing of a physical plant is not only expensive, but it is decidedly inconvenient to the plant's operation. The principle should be established, therefore, that the development of atypical spaces is to be avoided to as great a degree as possible. If it is agreed that, insofar as possible, uniformly sized rooms and rooms of normal shape will be used, the possibilities of conversion to other purposes are much greater than are atypical spaces developed for limited usage to meet the needs of to-day only. There is no reason why an electrocardiographic room need be of irregular dimensions, cut up into little cubby holes; why a special diet kitchen cannot be a large room of regular size and shape; why private rooms have many recessions. All of these not only cost money in construction but absolutely preclude the use of the area for other purposes.

The average individual thinks of a hospital in terms of bed occupancy only. Unfortunately the actual space occupied by patients is not to exceed 35 per cent of the total area of the institution. The efficient hospital plan, while liberally providing for patient occupancy, will at the same time always keep uppermost in mind a liberal provision for service areas, which are prerequisite to the efficient care of patients. Without proper utility rooms, diet kitchens, supply closets, adequate corridors, properly developed x-ray departments, operating rooms, delivery rooms, laboratories and facilities for special therapy, adequate service cannot be rendered to patients.

Not only must there be adequate space for these facilities, but they must be located in the proper relationship one to the other. Excessive travel to a utility room or to a diet kitchen automatically reduces the possibility of efficient nursing care. Close interrelationship between the laboratory and the operating suite, between the x-ray department and the operating suite and between special diagnostic services and the nursing unit has a direct bearing upon the efficiency of the future hospital.

Serious attention is urged to the development of a flexible plan subject to expansion or conversion to other usages, with a minimum of expenditures.

Estimating Financial Needs

The foregoing paragraphs should impress any governing body with the need to have the operating point of view paramount in preliminary development studies. Without this, the possibility is slight that there will be a sound financial approach to the whole problem.

The plan of development has now reached the point where it is necessary to consider the details of the financial program. Up to this point, the development has been in the study phases, and all plans are in the sketch style only.

If these studies have been properly developed, there will have been evolved an appropriate size of the institution and an approximate need for various facilities, making it reasonably easy to compute the approximate cubage of the prospective building. With this cubage calculated, it is relatively easy to estimate a figure that will approximate the financial needs for building.

If the money is to be obtained from popular subscription, it is necessary to develop a campaign organization. In this, each community is a problem unto itself. Some communities are self-sufficient and can organize their own campaign drives. Others require the assistance of outsiders. But whatever the method of approach, it is of primary importance that it be an organized one.

Costs Must Be Carefully Studied

It seems pertinent at this point to suggest, that if it is at all possible the initial capital funds campaign should be of sufficient size, not only to provide for the capital building needs of the institution, but also to provide a reasonably adequate endowment so that the operating problem of the institution shall not be overwhelming.

Up to this point, all plans have been in sketch form to permit changes to be made readily without expense. In the planning stage, new ideas and changed ideas may and will develop, but there comes a time when a deadline must be established. That time is at this point. Sooner or later, opinions must be crystallized, and beyond this deadline everyone must recognize that changes cost money and that they should not be made except for important reasons.

The number of those responsible for the development of plans should be reduced to a minimum, to avoid unusual interference with those who are responsible for the details of the development. The governing body should consider only the construction of a first-class building, as nearly fireproof or fire resistive as it is possible for modern knowledge to make it. Certainly this point should not require much discussion. The governing board should not assume the responsibility of placing patients in a building that is not fire resistive.

Those who build should build with permanency in mind. First costs are by no means last costs. What may appear as an extravagance is not necessarily one when the operating problem is considered. Tile in corridors costs money, it is true, but tile in corridors may be the means of saving a high maintenance expense. The same may be said of many other so-called extravagances.

Careful and economical planning will dictate the elimination of special items of construction and equipment. These special items in a large percentage of cases are faddish, expensive and not at all necessary for the efficient construction or operation of the institution. A careful scrutiny of existing specifications, covering commodities produced on a volume basis and consequently at a relatively lower cost, will demonstrate that there are existent commodities that will meet practically every building need. Proper judgment in the selection of these commodities will have a direct bearing on construction cost.

Another point to be considered is the close integration of building and equipment specifications, so that at the lowest consistent cost there may be completed an efficiently functioning hospital. In many instances built-in equipment is desirable. The provision of ventilating ducts, hoods and items of a comparable nature, as an integral part of the building plan, is relatively inexpensive. If these facilities are purchased and installed as equipment later, the expense is considerable.

The following comments on construction refer only to those items that have a direct relation to operating problems. No attempt is made to cover the multitudinous details of construction that enter into the building program itself.

Floors: The type and character of floors in the hospital have a direct bearing upon its operating efficiency. In general, there are two types of floors—hard and soft. There is no one floor material that will solve all floor problems. Various facilities demand different types of floors. In general, it is suggested that the soft type of floor be used in spaces of patient occupancy, in corridors and in places where the element of foot ease and of noise elimination must be considered. In operating rooms, utility rooms and sterilizing rooms, unquestionably the hard type of floor is indicated. One of the vitreous tiles makes a desirable floor, with terrazzo or a similar material as a substitute. In diet kitchens, laboratories, main kitchens and such rooms, the quarry tile floors offer a solution. In service corridors where traffic is heavy, still another type of concrete with an integral hardener may be the proper floor.

Choosing the Cove and Wainscot

In developing a floor schedule, the institution must be divided into various groups of facilities, and a proper floor selected that will best meet the need of the particular type of service.

Cove and Wainscot: Equally important from a standpoint of sanitation and maintenance is the selection of the proper type of cove. This cove should be not less than six inches high and should be of a durable material that will lend itself readily to cleansing. In rooms of patient occupancy and in corridors and spaces where there is heavy traffic, that consideration should be given to the desirability of developing a protective cove to keep wheeled equipment away from the walls of the building. While it is true

that a liberal allowance of money for wainscoting produces a high building cost, it is equally true that the proper use of these funds will materially reduce the operating problem. It is much more desirable to have a liberal allowance of wainscoting four and a half feet high than it is to have a fairly restricted allowance of wainscoting seven or seven and a half feet high. With few exceptions the former will answer the purpose and will afford a degree of protection that is to be desired.

Other Construction Details

Ventilating Hoods: An ideal arrangement is the placing of all sterilizers, ranges and equipment in which there is excessive heat or moisture under ventilating hoods built in as an integral part of the building. These hoods are of tile, glass, noncorrosive metals and in some instances ordinary plaster. The plaster hood, however, produces a high maintenance cost, and its use is to be deplored. It is important that the hoods shall be adequate in size, properly placed and adequately ventilated, either by means of a direct fan outlet to the outside atmosphere or through ventilating ducts.

Protection of Plaster: In those areas where wainscoting is not provided metal corner bead protection should be installed on the plaster.

Windows: Architects frequently tend to achieve an architecturally perfect exterior and to forget in a large measure the primary purpose of window openings. No hospital window should be higher than thirty-three inches from the floor. This is to allow an unobstructed view for the convalescent patient sitting in a chair. Careful attention should be given to the development of as large a window area as possible, not only to assure a cheery room but to provide ample ventilation. In regard to windows it is necessary to develop facilities for ease of cleaning, such as reversible double sash window or the installation of window bolts.

Doors: The question of transoms over doors and windows is a controversial one. However, the tendency seems to be toward their elimination.

The detail of the door jamb and buck is important. A discussion of the relative value of metal or steel is pertinent. Each has its good and bad points. However, a flush door jamb is not an essential feature. On all floors where there is to be wheeled equipment travel, the door should be a minimum of three and a half feet and preferably four feet. These doors should be swung on offset hinges to provide clearance. Some doors serving certain areas should have peep holes installed to prevent collisions among the workers. The installation of double swinging doors should be avoided, if possible. They are a hazard.

Hardware: This one item of construction produces great operating problems, due in a large measure to the insistence on the part of building committees that special items of hardware be purchased. It is wise to adopt simplicity as a philosophy in the installation of hardware. Multiplicity of equipment is expensive to install and expensive to operate. Cheap hardware in terms of first cost is generally the most expensive hardware that can be purchased. In buying hardware, typical systems of keys with master keys for each system should be developed.

Noise Control: The present day skeleton steel or reenforced concrete construction and the more compact planning of hospital buildings create a noise problem. This is due to the exaggerated noise transmission through the building structure, and to the concentrated traffic. To meet this difficulty, the insulation of floor areas and partitions, the installation of acoustical material of various types and the segregation of exaggerated noise areas by means of doors are all productive of good, and each makes a definite contribution to the general problem of noise elimination.

Stairways, Elevators, Incinerators

Stairways: Building codes in various states and municipalities are becoming more and more inflexible regarding stair areas and the ratio of stair space to general floor area. Certain codes require a minimum width of tread and a minimum width of landing platform, on the theory that any stairway in the hospital shall be of adequate size to permit the transportation of a stretcher sideways. There are certain requirements, almost universal in their application, regarding the free area on landing platforms in addition to the space occupied by the swinging of doors. The entire problem of fire exits and the necessity for the outward opening of all exit doors, the substitution of stairways for fire escapes and the location of these fire escape stairways, all are of vital consideration. While such requirements increase the cubage in the building, they are necessary under existing building provisions.

Ramps: Certain types of hospital buildings can readily substitute ramps for stairways, and, in fact, for elevators. In these types where the terrain permits of the type of building and the size of the institution justifies it, the substitution of ramps for stairways or elevators will be a

definite conservation of energy and of operating cost.

Elevators: The most efficient elevators that it is possible to purchase should be installed. Even the best elevators have a potentiality for trouble and produce operating problems that are exceedingly annoying. Economy in elevator installation is poor economy. Hospital elevators, of course, must be of adequate size to accommodate wheeled stretchers easily. They must be sufficiently fast to permit prompt transportation; at the same time they must be smooth in acceleration and retardation to reduce to a minimum the inconvenience of travel for ill patients. They must also be surrounded with all the safeguards and safety devices possible. In this connection should be mentioned the need for adequately ventilated elevator shafts, with the ventilation so planned that it will not produce drafts or cold.

Incinerators: The question of the disposal of rubbish and garbage is an eternal one. So far as rubbish disposal is concerned, we have for discussion the relative value of the central *versus* the decentralized incinerator system. The only proper way to dispose of rubbish is to burn it on the premises. Certainly the high ratio of contaminated material in any institution's rubbish requires such a plan. A centralized incinerator plant necessitates transportation of rubbish carts through the corridors and produces an operating nuisance. On the other hand a decentralized unit—incinerator units or incinerator chutes in every nursing unit—produces a potentiality of loss of supplies and instruments, by improper usage. Unless decentralized units are carefully planned they will produce an operating nuisance by improper or incomplete combustion. The problem is presented for discussion and evaluation of the two methods of planning.

A Study of Planning Problems

In the next few paragraphs a more intimate study of planning problems is entered into. In these paragraphs the electrical, plumbing, heating, ventilating and refrigerator equipment will be discussed. It must be remembered that the purpose of this article is to discuss only those items of construction that relate intimately to the operating problems of the hospital.

Electrical Equipment: Since the operating electrical services of the institution logically divide themselves into eleven different systems, it is proposed to discuss the problems thereof in the order of their volume rather than in the order of their importance.

1. Illumination comes first. Economy of construction demands that the number of circuits be reduced to a minimum. Economy of operation demands the breaking up of these circuits in such a way as to give both a minimum and maximum of service depending upon the need. It is suggested, therefore, that all corridor lights be staggered so that half of the lights or all of the lights may be used. A system of night lights should be provided for corridors and for large wards. This system is to be supplied with low wattage lamps in order to produce an operating economy. Stair halls and corridor lights should be key controlled to assure their supervision by a responsible individual or individuals.

Electrifying the Hospital

The atypical illuminating problem of the x-ray suite with its necessity for red and white illumination is important. Operating rooms, delivery rooms, emergency rooms, autopsy room and ward dressing rooms require special consideration and represent an important phase of the illuminating problem. An emergency illuminating system, independent of the normal one, is needed. An adequate supply of base plugs throughout the institution represents money well spent.

The type of illumination in areas of patient occupancy, whether direct, semidirect or indirect, should be determined. A service point at a patient's bed head for examination lights and for electrical equipment such as hot stupes, electric light treatment and services of a comparable type, must not be overlooked. Each patient's bed should have facilities for a reading lamp attachment. Under many conditions provisions should be made for electric fan outlets.

2. The power system is next considered. Experience dictates that the power system of the hospital shall be in separate conduits. Merely as a check list of the potential need for power, the following is submitted: facilities for meat choppers, potato peelers and similar devices in the kitchen, and also a close evaluation of the relative economy of cooking by electricity; laundry facilities; transformers and various electrotherapy equipment for the x-ray suite; a system for centrifuges and equipment of this type in the laboratories, which should not be operated off the illuminating circuits; a determination of the relative need for electrical sterilization as opposed to steam or gas in the nursing units and the provision of service facilities to meet this need; equipment for the mechanical shops.

3. The nurses' call system, being a low voltage system and subject to interference if it is run in the same conduits as the illuminating system, should unquestionably be provided with a separate system of conduits. Many standard

types of equipment on the market, each with its good points, offer to those responsible for the planning of a hospital a solution of their individual problem.

4. The installation of an efficient paging system is requisite to efficient service, and those responsible for planning must determine the type that is to be installed. Shall it be a light, a gong, a bell or a loud speaking telephone system? The suggestion is made that in planning this paging system an attempt be made to divide the institution into sections so that the paging may be concentrated in certain areas of the building.

5. The location of the private branch exchange or the incoming telephone outlet is important, no matter what is the size of the hospital, and it becomes increasingly more important as the size of the hospital increases. Needless to say, this telephone board must have privacy, primarily because of the nature of the calls handled, and also to remove from other members of the personnel the nuisance that constant telephone conversation produces. It seems desirable that the private branch exchange be placed in a room reasonably accessible to the administrative offices.

What Other Services Shall Be Installed?

Most of us regard easily available telephones as a prerequisite to present day life. Certainly in a hospital there is no desire, or at least should be none, to change lifelong habits, and it is necessary that there shall be an adequate supply of telephone service. It is easy, however, to err on the side of overdevelopment rather than underdevelopment. Each individual institution must evaluate its own problem and plan to meet that problem.

In planning the telephone service, there must be a decision as to whether it is to be used for outside telephone calls only or whether the problem of intercommunication will be handled by a central board. An intercommunicating system is necessary. There are, of course, the two points of view as to the propriety of the installation of an intercommunicating system, independent of the general system, or the use of the general telephone for both purposes.

An adequate supply of telephones should be available for the use of visitors.

6. Whether or not there shall be a fire alarm system installed is dependent in a large measure upon the building code requirements of the community. In a first-class building there hardly seems to be a necessity for a fire alarm system, especially as the institution is constantly under supervision. The problem is merely presented for discussion and decision.

7. There is, of course, the necessity of placing call bells at all entrances to the hospital. In particular there should be an emergency bell adequately served by personnel constantly on duty. There is further suggested a consideration of the location of call bells in all private and public baths, ringing on an annunciator at the head nurse's station.

8. In the last few years, some hospitals have installed synchronized time stamp systems. In some instances these are connected with the general time system of the institution, but in others they are operated on a separate circuit. No suggestion is made as to the necessity for this equipment in all institutions. It is merely inserted as a suggestion for consideration.

9. A properly devised location plan for a synchronized clock system, either operated as a separate service, or supplied by the telegraph company seems to be an indicated part of the equipment.

10. Since operation of a paging system is predicated, in a large measure, upon the telephone operator's knowledge of the presence of the attending physician, this seems to demand the installation of the doctors' register, the registering point to be in the doctors' cloak room and the recording station in the telephone room.

11. The need for a central electrocardiograph station is a moot question. There are those who contend that such a system is efficient. Others maintain with equal emphasis that it is subject to so much interference that accurate readings cannot be obtained. If a central electrocardiographic station is to be installed, it is necessary to have a separate system of conduit with outlets so arranged that the distance to any one bed on the nursing unit does not exceed fifty feet, and with equipment that provides direct telephone communication between the heart station and the patient's bed.

Plumbing Should Be of the Best

Plumbing Equipment: Again emphasis is placed upon the warning that the first cost is of minor consideration. Improper economy is ill-advised. There is no one element of construction that has greater potentialities for producing operating waste than a poorly planned and installed plumbing system. The best materials should be used.

In general there are three methods to be followed in installation—exposing all pipes, installing pipes in pipe chases properly planned so that they are easily accessible or burying all pipes in

the structure. No opinion is offered on the first two systems. There are advocates of each who are equally enthusiastic in their opinions, but it is desired to stress with all possible emphasis that hospital plumbing shall not be installed in the permanent structure, but shall be either exposed or in pipe chases.

It is important that all main risers be controlled by valves, and that each fixture be properly valved for control.

No Need for Special Fixtures

The installation of brass or copper pipe and the use of wrought iron pipe are dependent upon local water conditions and the relative hardness or softness of the general water supply. In general, it is believed sound to recommend that all hot water lines be installed either in copper or in brass and that wrought iron be used for the balance of the system. Of course, the ideal installation contemplates the use of a better grade of material throughout.

The installation of water softeners and water filters is of course dependent upon local needs.

Suggestion is made that consideration be given to the elimination of plated fixtures and that red metal or white metal fixtures without plating be used.

No attempt is made to discuss in detail the types of fixtures. There is no need for special plumbing fixtures. Standard equipment manufactured by leading organizations will meet every need of a modern hospital.

Care should be taken in the provision of toilet accessories, such as toilet paper holders, soap dishes, shelves, mirrors and bath grips.

Bathtubs should be accessible on both sides, in order to facilitate the handling of helpless patients. They should be relatively higher than the domestic tub and their supply and waste equipment such as to preclude injury to patients.

If a hydrotherapy system is to be installed care must be taken to see that an adequate water supply is provided.

The drinking water system is certainly a convenience and is almost an essential.

The water distribution system is dependent upon local conditions. Since the per capita consumption of water in an institution is exceedingly high, it may be found desirable to install supply tanks to supplement the general water systems.

A fire protection system is predicated upon local needs and the demands of the local building code.

The installation of acid resisting wastes in the laboratories, and the installation of diluting tanks of lead are suggested.

If the institution will spend the money to install grease traps on each fixture in its kitchen and utility room, it will, over a period of years, save many times the money spent for these added fixtures.

It is suggested for consideration that each one of the general systems—steam supply, steam return, cold water and hot water—be designed by distinctive colors and that the valves controlling each of these systems be of a typical color and shape.

The proper insulation of the hot water supply and of the cold water supply and return will be economical, insofar as hot water is concerned, and will preclude an operating nuisance of sweating pipes with cold water.

Heating system: No general rule can be submitted that will be universally applicable. A decision must be predicated upon geographic location, size of plant, character of buildings and many other elements. The assistance of a competent heating engineer as a part of the architectural services is accepted as necessary, but heating engineers have a tendency to recommend overradiation, and therefore it is suggested that installation plans be checked thoroughly for economy's sake.

A correlated problem is that of heat control by thermostatic devices. This again is a question that must be answered by each institution.

Experience has demonstrated that the problem of heating an operating room, no matter what type of heat is used, necessitates individual control of this unit and individual supply from the central point, unless drastic safeguards are applied elsewhere.

The Mechanical Ventilation System

The suggestion is made that a determination of the size of the mechanical ventilation system be arrived at by first listing all possible facilities to be considered and then ruling out unnecessary spaces.

That listing is as follows: patients' rooms; operating suite; corridors; toilets and baths; kitchens; closets; ventilating hoods; utility rooms; diet kitchens.

There is a tendency on the part of the engineer to overdevelop these systems. Generally, the successful operation of a ventilating system is predicated upon the control of all openings to the outside. This is an impossibility, with the result that we see many instances of expensive systems installed for the ventilation of private rooms and similar areas, whose operation is unsuccessful and therefore abandoned. There are certain areas in every hospital building that require

mechanical ventilation, but these areas must be studied carefully.

Under certain conditions, it is necessary to have air cooling devices and humidifying apparatus.

The refrigerating system: With the advent of efficient and economical individual refrigerating units, there is a changed point of view on hospital refrigerating systems. Formerly, the centralized plant employing various refrigerants, with the distribution of refrigeration to kitchens, diet kitchens, serving pantries, pharmacies, laboratories and the morgue was the only practical method. It was recognized that there was a certain loss in transmission, and that these systems were not economical to operate, but there had to be refrigeration and certainly it was more efficient by a system of mechanical distribution than by the manual handling of ice. There are those to-day who are discontinuing this distribution from central plants, and are installing small units in the larger hospitals for the manufacture of ice and for large cold storage facilities.

No brief is held for either system. The two general plans are submitted for discussion.

If a drinking water system is installed, it is desirable to connect it with the refrigeration plant.

Meeting Rural Medical Needs Through Cottage Hospitals

The continuous decline in the number of physicians in rural communities, not only in this country but abroad, is a matter for serious thought, in the opinion of the New York State Department of Health.

In the more remote rural sections of this country the situation is becoming grave. This problem, together with suggestions for its solution, are discussed in the *United States Daily* in an article prepared by Dr. Frederick W. Sears, district state health officer for New York.

The essential points are here summarized:

Thirty or forty years ago the state was made up of more or less isolated communities, each of which had a radius of perhaps five or six miles with its local stores, and its physician or physicians. It was only on special occasions that residents of these localities sought assistance from the larger centers of population.

With the advent of the telephone, good roads, the automobile and other means of rapid communication, the barriers have been removed. The larger centers of population, with their greater hospital and laboratory facilities, are within reach of the inhabitants of smaller communities; they are no longer dependent upon the local physician.

Hence it is only the rural physicians who live near these larger centers who can obtain an adequate living income during the entire year.

The remote rural community presents a particular problem, especially during the winter months. The expensive equipment and requirements of the large medical colleges have tended to eliminate the smaller ones.

Due to the time and expense required for graduation from one of these colleges, the farm boy, as a student in medicine, has been practically eliminated. On the other hand, the highly trained physician does not wish to practice in places where hospital and laboratory facilities are not readily available.

The solution of this problem is not to induce physicians through subsidy to practice in rural communities, as has been suggested, but rather to furnish modern facilities to enable them to practice on a plane with their training.

The reestablishment of some of the smaller medical colleges for the purpose of educating physicians for these rural sections has been suggested but it is believed that this would tend to lower medical standards.

One method of overcoming some of these difficulties is to establish inexpensively but adequately equipped rural cottage hospitals which will meet a large percentage of the local medical requirements. Such hospitals could care for emergency cases, maternity patients and minor surgical operations with less expense to the patient than would be incurred in a larger hospital, and would provide opportunity for the local physician to carry on his practice with increased satisfaction to himself and with greater safety and comfort to his patients.

Physician, Not Nurse, Is Found Negligent in Recent Ruling

A suit based on whether the operating surgeon or the hospital nurse who assisted him was liable for injuries to a young patient was heard in Oklahoma recently. This case is reviewed in the *Journal of the American Medical Association.*

The patient who was four or five years old had broken his collar bone, and it was considered necessary that it should be tied and the child's body placed in a cast. When the patient was on the operating table and under the influence of an anesthetic, the physician ordered the nurse to remove the adhesive tape and to cleanse the body. This she did, using some kind of a fluid for the purpose. After the cast was applied, it was discovered that the child's body below the cast had been burned. When the cast was cut away, it was found that the back had been burned from the shoulder blades down to the small of the back. Three or four weeks were required for the burn to heal. The father of the patient, as his next friend, sued the physician and was awarded judgment.

The case was appealed, but the supreme court of the state upheld the lower court's decision.

The physician contended that the accident was not due to negligence on his part since he did not remove the adhesive tape from the patient's back and that the nurse who did so was an employee of the hospital. The court, however, pointed out that the tape was not removed until the patient was on the table and under the influence of the anesthetic, and that it was removed under the direction of the physician. The court held that it was the duty of the physician, in using the nurse supplied by the hospital, to see that every act necessary for the operation under his immediate supervision and control was properly performed. The nurse was under the immediate control of the physician. The removal of the adhesive tape and preparing the body for operation were under his direction. Therefore, he was held liable.

The Value of Physical Education for the Mentally Ill

By JOHN EISELE DAVIS, M.A.
Senior Physical Director, U. S. Veterans' Hospital, Perry Point, Md.

As the result of years of experience, it is now demonstrated that a highly diversified program of physical exercise administered by trained therapists, with due reference to the changing personality and physical level of the patient, is productive of many varied psychical states and physical forms. The correlation of these results into a form of systematic knowledge that might be graced with the term scientific, however, is not yet achieved.

Generally speaking, the administration of an adequate program of physical exercise attacks the basic tendency toward negativism inherent in the make-up or environment of the vast majority of the mentally ill, particularly of many regressed psychotic patients. In cases in which arresting inactivity is due to a lack of what Stanley Hall terms "psychic impulsion," the competitive aspect of games provides a particularly effective medium. The impulse of the patient to play may be discovered in the phylon, environmental stimuli, such as imitation, or in the less regressed patient in the conscious mental process that conditions physical exercise with physical well-being.

How Play Influences the Mental Attitude

While the reduplication theory, the recreational theory, the surplus energy theory and the theory of play as a conditioner for life are replaced by the belief that play is life itself, there are, so to speak, certain A B C's of play conduct that are not transferred, *in toto,* into the variegated forms of activity characterized by the highly inclusive word, work. This situation leads to a consideration of the value of the play phenomena in its relation to the restricted forms of work activity. In dealing with the mentally ill, what value can we attribute to physical exercise as a mode of implanting or reenforcing a desire to enter into the more responsible relationship of life typified in graduated work activity? In a more general way we may enquire as to the transfer value of the mental attitudes and physical forms conditioned by play.

In commenting upon the mental attitude, it is necessary to differentiate between the motivation to work and the capacity to accomplish work. The therapist soon learns the necessity for emphasizing motivations. Many patients have a capacity for constructive action but will not make the initial participation. The problem of the therapist is to overcome this negativistic attitude. The transfer value of play comes prominently into many such situations. The typical antagonistic patient who "has had enough of hard work in the army," as he expresses it, will often enter into a competitive game and in many cases, through advancement to higher levels of competition, will assume the full responsibility of overcoming a difficult situation, thereby assuming a rôle of behavior that in its broad aspect differs little from a work project. Stanley Hall provides a most illuminating picture of human behavior as a totality of work, art and play. He reminds us that the differentiation of these is an artificiality, the result of the industrial evolution. At one time they were one. If we study the psychologic mechanism of play, we find that in its purest form play is spontaneous joyous rhythmic action. Hall calls it motor poetry. The informal nature of the personality expression through play is prominent. At this stage it is predominantly individual and generally noncompetitive, and is not encumbered with traditional norms of jaded adulthood. With the entrance of competition into play we find a restriction of goal and form of

activity that is antagonistic to the freedom of play in its purest expansive character. The next stage in this formalizing process that changes play into work is the introduction of professionalism into competitive athletics. Here we find all the elements of work in what we are pleased to call play. Energy is expended for a definite purpose with full responsibility for its objective which includes monetary payment for service. The distinction between work and play appears to depend more upon psychic impulsion than upon physical form.

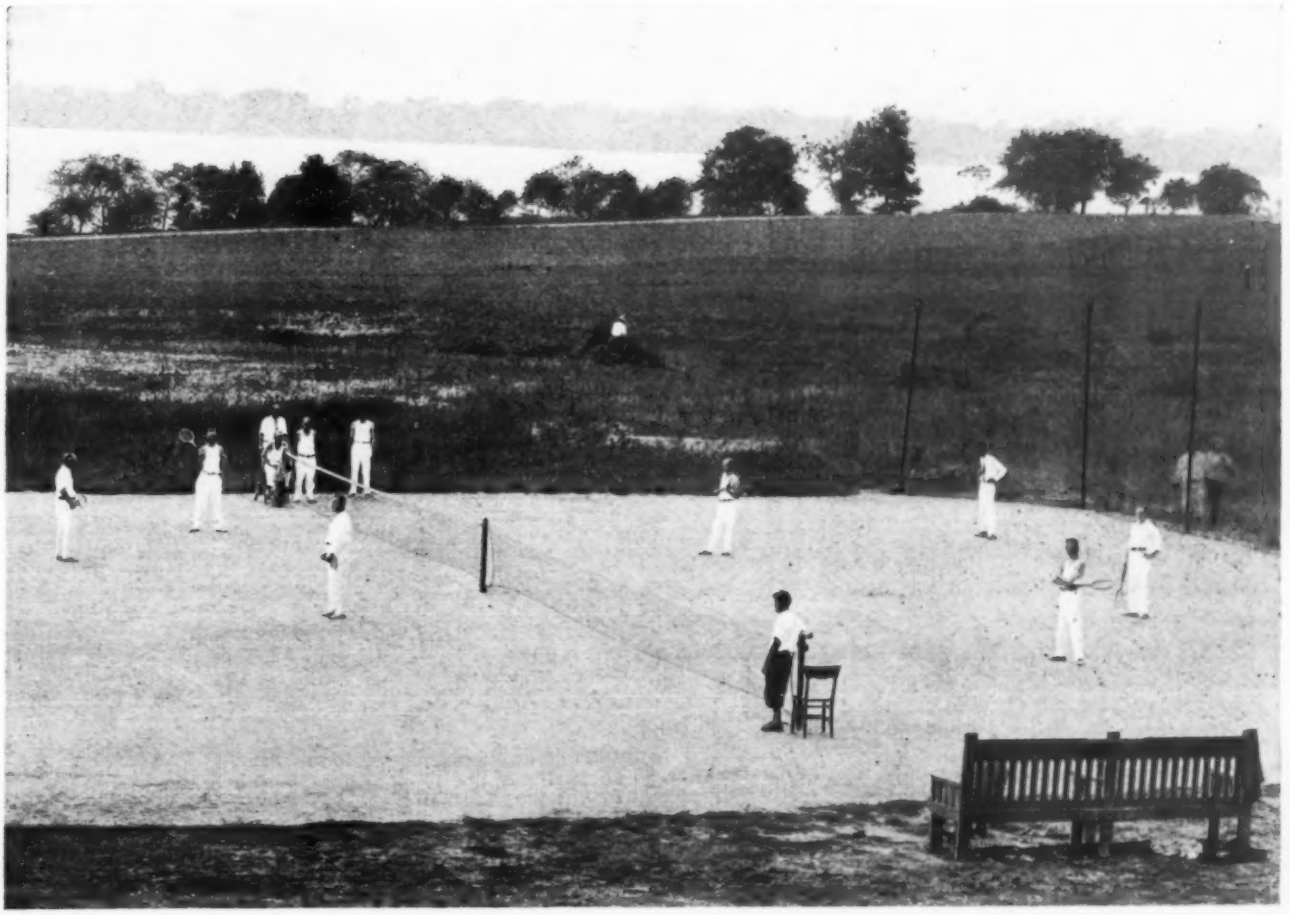
If this thesis is true, play, theoretically at least, offers a medium of pleasurable activity that may be transferred in the life of the mentally ill to other situations more closely related to the work process and hence to the economic restoration of the patient. I believe that there are possibilities along this line. In dealing with psychotic patients in a large hospital over a period of years, I have found many patients who would respond to no form of therapy except some particular aspect of physical exercise. In these cases the exercise was used not as an end in itself but as an introduction to the more responsible relationship of life typified by work.

One patient who was admitted to the U. S. eterans' Hospital, Perry Point, Md., on June 14, 1923, apparently represents a type of patient who finds in the various forms of physical activity some interest that he can accept and that will result in the initial participation into constructive activity. The clinical examination of this patient discloses a diagnosis of dementia praecox, hebephrenic type.

Winning the Patient's Interest

Upon admission, the patient said that people were trying to poison him, that the whole world was trying to own him. He was subject to delusions and was considered dangerous. He gave expression to systematized delusions and was antagonistic to all efforts to enlist him in any activity. He would have nothing to do with any occupational therapy activity and would not engage in calisthenic exercise. He was brought out for exercise with the ward and a number of different approaches were tried in order to invoke desirable participation. It was learned that at one time he had been a baseball player of fair ability, and efforts were made to interest him in baseball games. While at first he was antagonistic, refusing to have anything to do with the instructors, it was observed that he was attentive at the games and seemed to mutter less to himself while they were going on. One day he approached the

Patients at the veterans' hospital at Perry Point, Md., are shown getting into position for a volley ball game.



The patients' weekly tennis tournaments are held on courts that they themselves have constructed.

physical director and asked to play first base, explaining that Ward 8 was losing the game because of the poor playing of their first baseman. The physical director immediately made this change and told the patient that he appreciated his interest and felt that he could help his ward win the game.

Although at first the man played a mediocre game, he soon showed signs of natural ability. Each day thereafter he insisted upon playing first base and this was the only activity he would engage in at the hospital. He appeared to have a strong interest in baseball and continued to improve in his playing. It was noted that he showed a more cooperative and less antagonistic attitude toward his fellow players and instructors. Because of his improvement he was graduated from the ward team to the unit team which includes the two best teams in the hospital. This pleased him and he soon showed such social adjustment that he was transferred from the acute ward.

This patient showed such improvement that the physical director consulted with the clinical director, and requested that he be given an opportunity to play with the personnel team, so that he would have the opportunity to leave the hospital grounds. The clinical director gave this permission, although he explained that the patient was considered dangerous and should be watched carefully. Since the patient had shown no antagonistic tendencies after being promoted to the unit team, the physical director felt that he would cause no difficulty upon being taken from the hospital. He accompanied a strong personnel team to Aberdeen, Md., and played first base against the service team of the hospital there.

The physical director paid no conspicuous attention to him on this trip. He allowed him all the liberty that the other members of the team enjoyed. There was nothing in his conduct from the time he left the hospital until his return that could be called a psychotic symptom. He ate in the dining hall and conversed with the personnel and the Aberdeen players in the most rational and interesting manner. His improvement continued and he was then placed upon the all-star patients' team which competes with outside teams and was taken on a great many trips outside the station. Finally, in 1925, this patient asked to go home, saying that he believed he could make

a living, and on August 29, 1925, he was brought before the discharge board and discharged. He was free from delusions and had good insight into his condition.

It is believed that this patient is typical of a great many who because of their delusions, do not have the capacity to carry out any activity except that which has perhaps been established by many early repetitions and has an instinctive basis such as is found in play.

Another patient represents the apathetic type who has apparently lost the will to live and can find no interest in any activity except in the field of play. The clinical report on this patient shows that his diagnosis was dementia praecox, hebephrenic type. The doctor's progress note of November 16, 1922, says that this patient was apathetic except toward tennis and outdoor sports. He appeared considerably clouded and seclusive and did not carry on a conversation. He could not be interested in any occupational therapy activity, but would do certain kinds of work he was ordered to do without any apparent demonstration of interest or pleasure.

Play May at First Be Mechanical

When this man first came out for exercise, he could not be interested in anything but tennis which he would play in a mechanical manner. After playing the first summer, this patient showed much more interest. He would carry on a limited conversation, would ridicule the efforts of his opponents, and at times expressed praise for a good play. The physical director attempted to interest him in calisthenics. He took these exercises mechanically until one day he was told that it was not necessary for him to take this kind of exercise if he did not enjoy it and he discontinued calisthenics for approximately two months.

He then became interested in volley ball. This game seemed to be particularly pleasing to him, perhaps because it slightly resembles tennis and gave him an opportunity to show some of his ability. He soon developed into a good player and was placed on the unit team. The following season he was placed on the all-star team that competes with outside organizations. His superior playing was commented upon by visiting teams.

It was thought that he had reached the stage of adjustment at which he might find interest and pleasure in doing some constructive work, and he was placed in charge of the tennis courts at Perry Point during the summer and of the athletic clothing room during the fall and winter. He took considerable interest in this work. He became more sociable and cooperative and seemed to find pleasure and pride in his accomplishment. The tennis court became a model of neatness and cleanliness. He continued to show a slow but apparently sure improvement and his guarandian, noting this, requested a ninety-day parole in 1928. His adjustment has been so good that he has since been discharged. He is now working and apparently happy in his home environment.

Preparing the Way for Games

A desirable transference is effected in the construction of athletic facilities by psychotic patients who understand that they will have the pleasure of using these facilities upon completion of the project. Baseball fields, tennis courts, volley ball courts and handball courts can be built by patients who are interested in these games. The zest and joyous episodes resulting from this work make it akin to play.

Such vitalization of the work mechanism is especially desirable from a therapeutic standpoint. It is accomplished voluntarily and has a pleasurable objective that tends to instill a sense of the continuity of the process and the rationalizing capacity so necessary to its completion. With this purpose in view, the patients of the U. S. Veterans' Hospital, Perry Point, Md., have been allowed to construct tennis courts, baseball fields, a large grandstand and a handball court. In these projects the aim was to introduce the spirit of play into the work, and the cooperation of the patients was significant. One patient, a paranoid type, who worked steadily upon the construction of the ball field, said he had great fun in making the first base position level and smooth, as he played that position and wanted his performance to compare favorably with the others. The patients would sometimes slow up in their work, and this was due in some cases to the reaction of hyperactivity and in other cases apparently to a lack of psychic impulsion. Even though the field was unfinished it was found advisable to play ball upon it. After the game the patients went back to work apparently refreshed. These informal games, or practices, would apparently instill the desire to continue upon the project. It is believed that this situation illustrates the possibility of a valuable transference of activity from one field to another progressively allied to the improvement and restoration of the individual. In dealing with the psychotic patient, particularly, one is impressed with the necessity of vitalizing therapeutic projects. The ability to engender zest and spirit in an enterprise is one criterion of its successful accomplishment and

especially its therapeutic value. There appears to be a field for the development of play—work games which would artificially produce situations having the elements of the work experience and also the expansive spirit of play.

In this connection one should not overlook the value of the humanitarian spirit imparted by play experiences. Experience amply justifies an emphasis upon the kindly contacts of comradeship that are so admirably engendered in the heat of athletic contests. While in some quarters such qualities are viewed with complacent indifference, the experienced therapist knows full well their value as an opening wedge in leading the resistive patient into purposeful activity.

A well balanced program for the mentally ill consists of work, rest and play. All three of these elements reenforce each other to make the ideal system of therapeutics and the therapist should keep in close touch with the ward surgeon who will evaluate any unusual psychical or physical reaction of the patient in terms of indicated therapeutic procedure. The psychotic patient, particularly, finds considerable difficulty in concentrating upon a work activity over a long period. It has been proved that patients detailed for farm work, for example, will work much better if at least once a week they are organized into a ball team and assigned a game in the regular weekly schedule against some other hospital team. Such change of activity results in a redirection of thought and serves also to distract the patient, at least temporarily, from his monotonous routine environment, thus giving him a wider outlook. The instructor who organizes his patients into such interdepartmental teams and plays with them will establish a valuable contact that will enable him to reach a more adequate understanding of the therapeutic picture of his pupil, his physical and mental limitations and potentialities and his capacity for cooperative and persistent enterprise.

A conspicuous example of the transfer value of physical education is seen in the lives of many regressed patients who are assigned to swimming therapy. In every institution there are many regressed psychotic patients who have lost such fundamental habits as dressing and feeding themselves and the habit of personal cleanliness. Ordinarily these patients cannot follow mimetic calisthenic exercises. They remain passive and in many cases are not helped by assistive or resistive exercise. When they are escorted to the swimming pool it has been found advisable to employ psychotherapeutic measures in explaining that the water is warm, is purified, is not deep at the entrance point and that they will not be forced into deep water. An endeavor is made to surround the whole procedure with a friendly happy atmosphere. About 10 per cent of the deluded or hallucinated patients have a phobia of the water, and these patients are individualized and taken into the pool separately. The attendant wades about demonstrating that the water is not deep, and an attempt is made to discover favorable approaches in the patients' delusional field. For example, the patient who was afraid to enter the water because of an avowed cancer soon found that he could swim in spite of his imaginary condition and through daily swimming exercise apparently gave much less thought to regression.

When the patients are in the pool, the attendant swims from one to another reassuring them and helping them. It is interesting to observe the regressed patient in the pool. Generally he

The music class of the hospital enlivens its practice with a construction project—building a miniature golf course.

will enter the tank at the lowest depth in a cautious manner, hesitate momentarily to accommodate himself to the temperature of the pool and then slowly wade, confining himself to the low parts. Some patients continue in this restricted field for weeks and months. The majority, however, gradually wade into the deeper sections and, as if impelled by the instinct of self-preservation, strike out and swim. In most cases in which regression has caused the loss of the fundamental habits of feeding, dressing and personal cleanliness, swimming therapy, appealing to the basic instinctive level of the patient, is the only exercise he will voluntarily take. The transfer value of exercise is conspicuous here. Sixteen patients of the dementia praecox group at this hospital, upon being administered this therapy over a period of two months, were able to feed themselves and dress themselves, whereas previously all were either spoonfed or tubefed and two could not dress themselves. These fundamental habits appear to be reawakened by the primitive forms of locomotion and the comprehensive category of movements required in swimming.

The objection is often raised that recreation as a mode of therapy for the mentally ill is vicarious and hence cannot fill the place occupied by the occupational subjects. While this criticism may disclose a weakness in the system of passive recreational entertainment in which the patient simply looks on, it affords no valid argument against the active physical program in which the patient voluntarily participates. The physical forms and psychical attitudes of a physical program are not transferred, *in toto*, into the responsible social and economic relationships of life. This applies equally well to the majority of occupational therapy projects.[1]

The Ideal Nurse and What Physicians Require of Her

The ideal nurse for the present day physician is one who has good breeding and an attractive personality, skill in giving general care and making patients comfortable, who can observe and report symptoms well, takes care to follow medical orders and is adept at handling people.

This picture of the perfect nurse was ascertained from questionnaires sent to doctors in many branches of medicine, by the Committee on the Grading of Nursing Schools, which is conducting a five-year study of nursing and its problems. These qualifications were the five most stressed by the more than 4,000 physicians from all parts of the country who answered the queries.

Just how the various requirements for a good nurse rank in the minds of the physicians as a whole, may be seen from the following: 65 per cent want the nurse to have skill in general care; 65 per cent, skill in making the patient comfortable; 45 per cent, skill in observing and reporting symptoms; 43 per cent, care in following medical orders; 34 per cent, good breeding and attractive personality; 30 per cent, skill in handling people; 28 per cent, skill in asepsis; 27 per cent, familiarity with hospital routine; 22 per cent, experience and background; 21 per cent, familiarity with their personal methods; 15 per cent, ability to work under a heavy strain; 15 per cent, familiarity with a particular disease; 3 per cent want the nurse to be a responsible adult to take charge of the family; 3 per cent want her to be a mother's helper and houseworker.

The modern physician thus places the old-fashioned concept of a nurse as "a pair of hands and feet" at the bottom of the list. His demand now is for a woman of good background, of high professional principles, with thorough training and experience in the actual care of the patient, as nurse for his cases. The study shows that the demand for practical nurses by physicians is steadily dropping, with 84 per cent preferring the graduate, registered, trained nurse at all times for their own cases, and an additional 8 per cent preferring them always for certain types of cases.

Ability to Give General Care Important

The general practitioner and the internist are most interested in the ability of the nurse to give general care, 69 per cent and 70 per cent, respectively, registering for this quality, as compared with the average percentage of 65. The neurologist is least interested in it, though more than half of those questioned checked for it.

Skill in observing symptoms is most desired from the nurse by the surgeon, neurologist, obstetrician and pediatrician. The three last-named groups also had a more than average interest in the qualification of good breeding and personality. The surgeons emphasized skill in asepsis and care in following medical orders as well. The neurologists are by far the most interested in having for their patients nurses who can handle people, 61 per cent checking this, as compared with an average of 30 per cent. Nurses who take particular care to follow orders shine brightest in the eyes of the pediatricians, 57 per cent of them desiring this qualification, while the average demand is 43 per cent.

Nine out of ten physicians reported they are getting the nurses they want and would be glad to take the nurse on their last case back again. The surgeons were the group most satisfied, 63 per cent of them marking their nurses with the highest rating.

Some of the typical comments made by the physicians, that show what they appreciate in nursing care specifically, were: "A good observer, gentle, thorough. She follows orders explicitly and reports changes promptly." "My nurse has a sense of humor, which helps a lot." "She kept hordes of anxious relatives and friends out of the room." "She has always been cheerful." "She combined a good technical training with common sense." "She carried out orders but modified them when the need was obvious." "She had a proper sense of the dignity of the position." "She is intelligent, observing, not afraid to take a severe case twelve miles in the country." "She was a good cook and knew how to handle people." "There has been a very distinct improvement in the patient's mental condition during her stay in the hospital." "Her asepsis was perfect." "She was of great value in preventing a psychosis from developing."

[1] This article is published by permission of the U. S. Veterans' Bureau, which assumes no responsibility for the opinions expressed.

Practical Administrative Problems:

The Need and Nature of a Surgical Standing Order Book

By JOSEPH C. DOANE, M.D.
Medical Director, Jewish Hospital, Philadelphia

IN PRECEDING articles suggestions have been made for the compilation of standing orders covering several of the hospital departments. It is the purpose of this article to continue this discussion by referring particularly to the importance of originating and adopting such routine instructions in the surgical departments.

In recent years there has been a tendency to apply the yardstick of standardization to many of the policies and procedures affecting the hospital as a whole. The number and education of interns; the type of records kept; the amount and scientific accuracy of laboratory work done and the number of postmortem examinations held have all been subjects of discussions and of unofficial enactment. More specifically, a laudable attempt has been made to standardize the multifarious gauze articles in use in the hospital and to bring about as well some routine in the method of preparing and counting surgical sponges. On the other hand, there remains much to be done in bringing some order out of the present chaotic uncertainty as to the best methods of preparing patients for operation, the most effective technique to be employed during such treatment and the procedures best adapted to the after care of patients who have undergone surgical interference.

Procedures Should Be Standardized

There are some hospitals in which such a simple and routine practice as the preparation of the surgeon's hands is as varied as the number of surgeons on the staff. There is no reasonable basis for such a multiplicity of techniques. Moreover, it seems far easier to bring about a general agreement as to the type of instruments and apparatus best adapted to a specific purpose than to decide upon the most desirable routine insofar as it affects the actions of the individual. Thus those well acquainted with hospitals have had the amusing experience, if it were not tinged with tragedy, of viewing a distraught operating room nurse endeavoring to remember whether an individual surgeon approved of a certain make and size of laparotomy sheet or whether another, slightly varied in its dimensions and cut, was the type which he had demanded. Indeed in some institutions of size, a book is to be found in the operating suite in which the nurse has endeavored to set down in catalogue form the various idiosyncrasies of each surgeon in order that she may not displease him by offering some variance in instruments or equipment that would result in unpleasantness and a break in the morale of her department. Such notations range from the scientifically sublime, the individual physician's prescribed method of sterilizing the stump of an excised vermiform appendix, to the personally ridiculous, the best method of adjusting his glasses or of capturing a fugitive drop of perspiration.

Points to Include in Standing Orders

One asks whether or not it is possible for a surgical staff to agree upon a set of standing orders that will obviate much of the lost motion and wounded feelings incident to the proper conduct of the operating system. The staff of surgical departments is variously organized. Due to the fact that there is rarely any real centralization of medical authority within the staff, the standardization of preoperative, operative and postoperative procedures appears to be rather difficult. Nevertheless, the chief of the surgical staff is frequently of great assistance to the superintendent of the hospital, as well as to the operating room nurse, in establishing an effective routine. No staff organization is adequate unless the duties and prerogatives of the chiefs, associates and assistants are definitely set down. Operating days should be decided upon. Definite rules governing the schedule of operations, as well as the priority of claim for a disputed time request, must be worked out. It should be decided without question who is responsible for ensuring the proper performance and recording of the preoperative examination of patients' chests and the use of the proper technique for dressings.

Although perhaps more properly treated later in this article, the following detailed mention of

standing orders relative to the preparation of the patient for operation and the establishment of a suitable dressing technique will be discussed here. One cannot avoid being impressed by the haphazard method in which the interns often perform their dressings. Moreover, such departures from the proper technique are not always the fault of the young physician but frequently that of his surgical chief. To observe in these modern days of medicine an intern or a nurse performing dressings without capping, gowning or gloving is as surprising as it is inexcusable. Why it appears to be such a colossal job to don a cap and gown and gloves seems unexplainable. Perhaps the basis of such shiftlessness lies in the fact that visiting surgeons and their assistants are inclined in many cases to brush by the clothes tree on which gowns are hung and to touch the patient and his bed with hands that may not have been thoroughly sterilized since the examination of the last patient. Young interns observing this breach of technique are prone to do likewise. Standing orders should certainly be set down covering these points and the members of the visiting staff enjoined to lay before the intern nothing but the best example.

Most hospitals have rules covering the equipment of the surgical dressing cart. Usually in routine surgical ward orders every article necessary for a well set up dressing cart is enumerated. For example, in one of the larger institutions, the following list of articles and materials must be found on every dressing cart:

Sterile

4 dressing basins
Emesis basin
Sterile water
Alcohol
Sponges and compresses
Package of towels
Oblong basin containing probe, groove director, 2 hemostats, 2 tissue forceps, 2 surgical scissors
Sponge holder in container of 2 per cent compound solution of cresol
Doctor's gown
One pair of gloves
Medicine glass with 3½ per cent tincture iodine
Medicine glass of 70 per cent alcohol
Safety pins
Package of iodoform gauze
Gauze wicks
Sterile gauze, packs large and small

Unsterile

Paper bag
Emesis basin
Dressing rubber
Chest blanket

If an ointment is used, sterile blades will be required to spread the ointment on the gauze. If the wound is to be irrigated, a sterile glass syringe or a sterile irrigating can with tubing and point will be required.

Definite standing orders as to the proper dressing technique, such as the wearing of gloves, instructions relative to touching the wound only with sterilized instruments and the use of proper sponges and drains are necessary. Nor does it seem unimportant to suggest the inclusion of special instructions requiring that sterile dressings shall be handled only by surgically clean hands or forceps and that in the opening of a package of sterile dressings, care must be taken not to allow the outer side of the covering to come in contact with its contents.

Preparing Salt Solutions

In the discussion of the equipment for the dressing cart, it may be added that of the solutions contained thereon, none is more important than the presence of a properly prepared salt solution. Particularly is this the case if the intravenous injection of saline solution is practiced and a stock solution is employed from which this is prepared. For example, if in the ward, as is sometimes the case, a 26 per cent stock solution is employed, it is wise for the nurse to know the exact amount of sodium chloride to a quart of water necessary for the accurate manufacture of such preparations—7 ounces 5 drams 36 grains C.P. sodium chloride, NaCl, to the quart of water. From this solution 4⅔ drams added to a pint of water will equal a normal solution.

Perhaps more surgical wards fail in a greater degree in keeping an adequate record of the work done therein than in any other respect. Certainly a dressing book should be kept in which a record of patients treated, drains inserted and the general comment by the nurse covering the dressings performed are set down. The daily note which the intern should make on the chart in reference to the dressings he performs is a necessary addition to the patient's record. Moreover, the dressing book is a valuable check upon the number, the date and the hour of dressings performed and serves a useful purpose in large institutions in preventing an oversight in the performance of an individual important dressing. The standing order book should also contain rules requiring that a permanent record be made, perhaps on the anesthesia sheet or perhaps on the patient's progress sheet, of the removal of drains that were inserted in the operating room, thus making possible a definite comparison of the number of pieces inserted with the number and

type of drains removed. The purpose of such a regulation is obvious, as in some unfortunate instances drains have been left an unduly long time in cavities or sinuses to the certain detriment of the patient and the hospital.

There is perhaps no more important period of time in the life of the surgical patient than the days that precede the performance of his operation. This fact cannot be stressed too strongly. In these days of hurry, the patient frequently reaches the operating room before his condition has been adequately studied. There should be enacted a definite regulation forbidding the performance of elective major operations on the day of the patient's admission to the hospital, except in cases of emergency. It is presupposed, of course, that at no previous time has a thorough clinical and laboratory study of the patient been made. It should also be definitely set down that sufficient time must be given the hospital by the surgeon for the proper notification of relatives and the referring doctor; for the securing of legal permission for operation; for the proper scheduling of the operation in the surgical clinic and above all for the careful and intelligent examination of the patient's body for defects that might contra-indicate the surgical procedure in operations of election or that in any event may determine the type of anesthesia to be employed. Orders for the preparation of the patient should certainly be in the hands of the head nurse in the surgical department by four o'clock on the afternoon preceding the operation.

Providing for Preoperative Care

Fortunately the day is rapidly passing when the barbarous practice of preventing the patient from sleeping during most of the night preceding operation because of the performance of preparatory work was the rule rather than the exception. Even to-day the feelings and rights of patients are too often grossly offended. One observes patients being hastily prepared by the abbreviated night force of nurses, with abdominal shaving and dressings that keep the patients awake far into the night. The standing order book should certainly contain definite instructions as to the surfaces to be shaved by members of the ward nursing force. With the advent of more efficient chemical antiseptics, fortunately more of this preparation is being done in the operating room itself and frequently after the patient is under the anesthetic.

The surgical standing order book should set down the extent and nature of skin preparations for each type of case such as, for example, shoulder, chest, abdominal, rectal, vaginal, spinal and extremity operations. Such a small and relatively unimportant procedure as the proper care of the surgical razor is frequently one that is deemed unworthy of mention in the standing order book. There is no greater offense to the patient's feelings than the use of a dull and ineffective instrument for shaving. Experienced hospital persons have observed patients coming to the operating room with skin that has been abraded and lacerated by a clumsy attempt at dry shaving with a dull instrument. Keenness, cleanliness and proper sterilization of the razor are but the most basic of preventive measures against this inexcusable offense to the patient's tissues and feelings.

Patients' Feelings Should Be Spared

While usually contained in the standing order book of the school for nurses, the proper method of clothing operative patients is of importance. While each hospital is likely to possess its own technique covering this procedure, little improvement has been wrought either in make or comfort over the usual operation gown with detached leglets. The frequency with which one observes patients being placed on the operating table with an evident need for previous catheterization prompts the average hospital executive to insert in his standing order book, for the approval of the surgeon, a rule governing preoperative bladder drainage. In some hospitals, the responsibility for removing false dentures is placed upon the operating room staff and not upon the ward nurse. Such a rule certainly spares humiliation to the patient. Whether false teeth are removed in the ward or in the operating room, a definite regulation covering the responsibility for this procedure must be set down.

Reference has been made to the practice of what has been termed anoci-association, which being interpreted, refers to the sparing of the patients' feelings in every way possible, thus lessening preoperative and postoperative shock. Let it be clearly set down here that the importance of practicing humanitarian principles, beginning with the administration of the anesthetic, is of the utmost scientific importance. All patients should be prepared for sleep not later than ten o'clock on the night before operation. The administration of a routine somnifacient on the night previous to operation is a kind and humane gesture. Enemas or other treatment should not be permitted before seven o'clock on the day of operation.

The patient should not be sent to the operating room more than ten minutes before the hour set for his ordeal. He should not be required to

listen for long to the sounds or to experience the terrifying odors and sights that are so inoffensive to the initiated. Most experienced surgeons will agree that an hour spent in the atmosphere of a busy operating room suite before operation is a harmful experience for the surgical patient. It is considered wise by many to set down definite special preoperative precautions to be taken in special types of cases, such as the goiter patient and operations on the cardiac. Moreover, the practice of sparing preoperative shock by particular attention to detail in these and other special cases is one worthy of adoption. Who has not seen on the hospital tonsil day the gathering together of a large group of children, some undergoing the excitation of early anesthesia and some noisily recovering therefrom? Even at the cost of time on the part of the busy surgeon, such scenes should be avoided. It must be remembered that there exist definite rights on the part of ward patients that supersede even the wishes of the surgeon to complete the day's operative work quickly.

Graves' Disease Patient Needs Special Care

Reference has been made to the wisdom of setting down standing orders for special types of cases. No patient requires the practice of a refined preoperative technique more than the patient suffering with Graves' disease (exophthalmic goiter). The following special precautions have been suggested for this type of case: isolation of the patient during preoperative treatment; recording of temperature, pulse, respiration and blood pressure at least thrice daily for the week preceding operation; absolute rest in bed; limitation of visitors; if inhalation anesthesia is to be employed, the daily moving of the gas machine into the patient's room by the anesthetist and the application of the mask to the face to acquaint a nervous patient with its appearance and use; if rectal anesthesia is to be used, the avoidance of suspicion on the part of the patient by suggesting that an enema is to be given on the following day (that of operation); the time of breakfast should be changed from time to time so that on the morning of the operation, the patient does not miss his first meal and thus become suspicious that he is about to be operated on; weekly weighing and the donning of operating room clothes on the day of admission.

In the case of the tonsil patient, it need hardly be stated that all standing orders should include a provision requiring a study for ascertaining bleeding and clotting time, for typing blood and for the detection of chest and kidney defects. Sufficient definiteness should be employed when writing preoperative standing orders for nose and throat patients to impress upon all concerned that a tonsillectomy is far from being a minor operation.

Another special type of patient requiring most careful preoperative study is the man or woman who is to undergo surgical interference for a disease of a viscus in the right upper quadrant of the abdomen. A study of mortality statistics covering the excision of the gallbladder or other operations upon the bile passages convinces one that there is much to be learned in regard to preoperative and postoperative procedures in these patients. Certainly such important and exact studies as the performance of bromsulphalein tests, the nonsurgical drainage of the gallbladder for the detection of crystals in the diagnosis of stone, as well as the application of x-ray for the diagnosis of the latter condition are steps that have passed beyond the experimental stage as to their usefulness. Many surgeons require that gallbladder cases undergo a number of days hospitalization prior to operation. The use of intravenous glucose and of calcium to lessen the danger of hemorrhage is routine requirement in many hospitals.

Definite preoperative orders should also be set down in regard to the preparation of patients for spinal or cranial operations. In emergency fracture cases, a time consuming study cannot be carried out but in preparing the patient for an elective cranial operation, such as the excision of a brain tumor, much can be learned by performing encephalograms and spinal punctures when indicated and by the application of the principles of dehydration when intracranial pressure is high.

What Orders Should Cover

The genito-urinary surgeon fully realizes the necessity of properly preparing the patient before he undertakes the removal of a hypertrophied prostate. Days and even weeks are consumed in lessening toxemia and in lowering the improper concentration of chemical bodies in the blood.

It appears, therefore, that preoperative precautions, as enumerated in a standing order book, should have as their dual purpose the preparation of the patient psychically for a surgical operation and a general inventory of the patient's probable reaction to the serious and extensive disturbances of bodily mechanisms that almost routinely take place at the time of operation. It is contended by many that greater skill and judgment are required to decide when to operate.

It is impossible to expect that any successful standardization can be brought about in the actual technique employed by the surgeon at operation, but certainly it is not too much to require, as has been intimated, that such steps as the draping of patients, the sterilization of hands, the counting of sponges, as well as the use of standardized sponges are all subject to a successful regulation. In many hospitals this has been brought about and, by so doing, these institutions have been saved not a little in the unnecessary expenditures for instruments and other equipment as well as in the time of their personnel. It is most extravagant and unnecessary for a special set of instruments to be demanded by each specialty surgeon. Even the purchase of an expensive operating table for each specialty has at times been requested and in most instances rightfully refused.

Regulating Transportation of Patients

Standing orders should certainly exist relative to the transportation of patients from the operating room to the recovery room, the patient never being allowed to be wholly within the custody of a nonmedical person. In some institutions, definite regulations as to postoperative catheterization of patients have been adopted and a technique formulated that must be employed by all concerned. Interns are frequently supplied with instructions by their surgical chiefs as to what shall be done in the case of extended vomiting, rise in pulse rate or the appearance of cyanosis. Just as important, perhaps, as the preoperative preparation of the special case is its postoperative care. This is true of the goiter patient in which the taking of the blood pressure; the application of the ice cap to the precordium; the sponging of the patient's hands and face with ice water and the general attention to medication, as well as the psychic needs of the patient are found to be important factors. In the tonsil patient, careful watching for hemorrhage during the first twenty-four hours; the application of the ice collar if desired and the prescribing of a bland diet are all matters worthy of attention.

No attempt has been made in this article to enumerate all of the types of cases for which standing orders have been found to be useful and it is readily acknowledged that patients suffering with gastric, ophthalmologic, orthopedic, rectal and other conditions require careful attention before, during and after operation. It has been the aim of this sketch to suggest the need and the nature of surgical standing order books. How may this be brought about, one asks? In reply it should be remembered that no orders can be given by any one other than the surgeon in charge of the case. The superintendent of the hospital can urge, if he desires, the advisability of routine orders. Each surgeon must elaborate his own. A compilation of these orders presented to the staff executive committee and forwarded to the board of trustes is the *modus operandi* of choice in bringing such a book into existence.

In a future issue of THE MODERN HOSPITAL standing orders relative to the pediatric, gynecological and maternity departments will be discussed.

The Vanderbilt Clinic's System for Handling Its Patients

The Vanderbilt Clinic, Presbyterian Hospital, New York City, has evolved a practical, time saving system for handling the patients that pass through its doors. The system is described by the *Educational Business Manager and Buyer* as follows:

The patient fills out an application form which is presented to a registrar.

The registrar interviews the patient, secures information as to his financial ability and, if the case is one that may properly be admitted, indicates the department and the doctor to whom it is referred.

The patient then passes the cashier and pays for a ticket of admission for which a charge of $1 is made. Exceptions to the charge may be made only by the registrar. About 19 per cent of the cases are admitted free and about 11 per cent are handled under reduced charges.

The patient presents the admission identification slip together with the admission ticket of the cashier to the proper department. If the case indicates that the person should be placed in the hospital the proper steps are taken to transfer the person to the hospital. Otherwise, the necessary treatment is given in the clinic. If a special service is rendered for which a separate charge is made, a ticket is filled out by the doctor or nurse in the department and the money collected from the patient. This money is sent by a pneumatic tube to the central cashier and a receipt together with the change is returned. The department then proceeds with the service. Each day the departments report to the superintendent's office the admission ticket numbers they have received and at the same time the central cashier reports the numbers that have been issued. These reports are checked against each other. If special work or materials are required, a requisition is filled out by the department and submitted with the money to the cashier through the pneumatic tube. When the receipt is returned, the patient is sent to the proper department.

If the patient is unable to see the doctor indicated or to secure the service on the day when he has been admitted, he receives from the department a refund slip which is presented to the cashier. The cashier makes a refund of the amount paid. Service must be obtained on the date of the admission ticket.

When extended treatment is involved either in the clinic or in the hospital, deferred payments are permitted. These payments are arranged in such a way that they are completed before the service is completed.

Editorials

What of the New Generation?

WHAT are the opportunities for young men in hospital administration?

Such actually or in substance is the query that comes to the leaders in the hospital field many times during the year. And an honest answer is not always easy to formulate. The position of many hospital executives ranks but slightly above the level of a mere job. The professional attributes and atmosphere of the place occupied by such hospital executives often seem conspicuously lacking. Boards of trustees still blindly engage $300 a month men and women to conduct $3,000,000 hospital plants.

Often the ink on the attractive announcements of schools for the education of those who would enter institutional management as a life work has scarcely dried before these attempts at building a profession have passed into a hopeless oblivion. It would not be an evidence of good taste to discuss here the reasons for the abortive failure of these attempts to conduct courses for future hospital executives. Suffice it to say, in some instances neither the curriculum nor the instructorial staff has always commanded the maximum of interest and respect from those who normally would be interested. Still young men and women of promise, of education and of culture, vainly seek an opportunity to acquire the knowledge that will enable them to administer the affairs of the hospital scientifically and efficiently.

To be sure the apprentice system offers to the future hospital superintendent some hope. But this plan is neither sound educationally nor does it offer any real promise of ever bringing those who learn as they labor to the goal for which they search. Furthermore, no standardization of the information thus secured is possible and such an education is likely to represent in too great a degree the beliefs and practices of a single man or woman. Still no younger generation is being prepared to wear the mantles of those who all too soon must lay aside the arduous duties of conducting the great hospitals in this country of which this generation may be so proud. "Where can we learn the science and art of hospital management?" ask these eager for work in the service of the sick. The workers in the field do not reply, and no answer comes from the great hospital, medical and surgical associations.

When will a leader arise who, perhaps commanding the respect of some eminent philanthropist or foundation, will be able to establish in one of our institutions of learning a course of instruction for hospital administrators that will be both financially and educationally sound? Then and only then will an encouraging, truthful answer be possible to this query. Only then will we be able to attract the best of our young American manhood and womanhood into the service of the sick.

The Shoemaker and His Last

THERE is a twilight zone that separates medical and lay administrative matters. In this semidarkness of ill-defined duties and responsibilities, there is much groping by hospital men and women of both medical and business training. Perhaps these two classes of individuals are too definitely differentiated in the minds of the public generally. It may be that the petty friction and the harmful jealousies that arise are generated by unwise and thoughtless actions of a nonrepresentative minority of each group.

On the other hand, it cannot be denied that too many staff doctors are not content to treat patients alone but are prone to attempt to dictate the hiring of anesthetists and dietitians or the fixing of room rates or special charges. When physicians hold places on managing boards, this tendency is likely to be accentuated. It is true that many seasoned staff physicians possess splendid business judgment. But to bring about helpful coordination of effort the surgeon must operate, the physician must prescribe and the superintendent must direct and oversee.

Draw up and officially adopt a blue print of organization. Translate its graphic representations into carefully worded rules and procedures and then preserve that fine relationship that is so productive of good institutional morale.

"Let the shoemaker stick to his last" is an old but helpful bit of advice that hospital workers both high and low should heed.

The Making of the Pharmacopeia

THE United States Pharmacopeia is the therapeutic Blackstone of the physician. In it are to be found the names of drugs that have stood the searching study of the pharmacologist and the chemist and as well the painstaking observation of their physiologic action by the clinician. Only those agents should be granted places in this volume that have been proved by

use at the bedside. Yet at the recent pharmacopeial convention in Washington, D. C., there seemed to be an undercurrent of effort to secure the recognition of certain drugs on the basis of some other claim than that already stated.

The undisputed pressure of evident selfish commercialism, the influence of the manufacturer, the suggestion of undercover manipulation of voting strength in order to gain the acceptance of some drug of possible value, are signs that augur danger to the sick. Although but one-third of the members of the revision committee were medical and scientific representatives, there should be no question but that the opinion of this minority should determine the wisdom of admitting useful new drugs or of deleting old ones. The pharmacist certainly should not seek the responsibility of making such a decision.

The hospital is greatly interested in the results of the work of this eleventh decennial convention. Should commercial interests triumph and therapeutic justification, as the only reason for the acceptance of drugs, fail, patients' lives will surely be endangered and hospital dollars will as certainly be wasted. The shelves of hospital drug stores are full enough of preparations of doubtful efficacy and of questionable composition. If the protection of pharmacopeial recognition proves unreliable a most effectual sheet anchor will be lost. The influence of the public, the medical profession and the medical and hospital journalistic field should be employed to unmask and drive out those wolves, which in the guise of lambs, have apparently crept into the pharmacopeial fold.

A Code of Ethics Still Wanted

MORE than a year ago a similarly captioned editorial appeared in these columns. It was pointed out that all the learned professions have formulated and adopted basic policies that in most instances differentiate ethical and unethical conduct. Even in the trades there is a rather generally accepted code of ethical procedure. Such is not true in the case of the hospital which often conducts its business along lines that too closely approach the borderland of questionable ethics.

The physician does not entice patients from his colleagues, does not advertise, nor does he participate in any business practice that smacks of sharp dealing. The hospital cannot deny that it sometimes offends in some one of these respects. Why, for example, should the hospital continue to adopt the pose of the mendicant, asking alms from every passerby? Why should it feel free to solicit contributions from those who sell goods to the institution? The practice of sending broadcast handkerchiefs, pencils and calendars of an inferior quality, of mailing rather indiscriminately tickets for a benefit or a lottery and of soliciting in the sweet name of charity an exorbitant fee therefor is an abominable affront to an intelligent public. It would be far better for an institution whose public does not support it, honorably to face the issue and close its doors rather than subsist by means of such practices. The hospital has a right to require payment for services rendered and this also in a measure applies to treatment given to so called free patients, (some portion of whose expense should be met by taxation).

To prepare and adopt a code of ethics and to require each member to agree to acquiesce thereto is the plain duty of the board of trustees of the American Hospital Association. How much longer must this necessary step be delayed because constructive leadership does not make its influence felt?

Wanted: A Psychologic Test for Employees

THE art of selecting hospital employees is one that seems to be acquired largely by the trial and error rule of thumb method. Everyone who has made note of his judgments and the outcome of his selections is surprised at the number of mistakes he made before he adopted a sort of code for his own use.

There is no more important function devolving upon the hospital superintendent than the selection of employees and if he leaves this duty to his subordinates, he will increase his turnover and decrease the efficiency of his organization. As he grows in experience, he acquires a sort of sixth sense that enables him to separate the sheep from the goats with a considerable degree of accuracy.

One hospital superintendent who has had considerable success in this regard has adopted the rule that he will not appoint any person who is not physically sound and subjects the applicants to a thorough physical examination, including a Wassermann reaction and a urinalysis. In this way he has been able to cut down materially the number of absences on account of sickness. He also finds that those who are physically sound are more apt to be even tempered, sane in their judgments and steady at their work. He endeavors also to conduct a few simple psychologic tests, designed to determine the applicant's alertness, his reaction time to mental stimuli and his

powers of concentration. He prefers to apply these tests during the course of the physical examination and in a casual and informal way so that the examinee may be off his guard. A surprising amount of information may be gathered in this way and the time so spent brings good returns. As a corollary to this and, with the view to preventing turnover, he has a fixed rule that he will not reemploy persons who have resigned or who have been discharged.

All of this is rule of thumb procedure, however, and what is needed is an accurate and simple set of psychometric tests that will gauge with a high degree of accuracy an applicant's qualification for the position. For some positions, the Binet-Simon standards may be used, but for positions that are to be filled by persons who have met the requirements of schools and universities, a more advanced test is necessary. A crown of glory is waiting for the person who will supply this need for the field of hospital medicine.

Is the Nurse a Poor Life Insurance Risk?

THAT the calling of the nurse is hazardous is conceded by those who have had an opportunity to study morbidity and mortality statistics covering this profession as a class risk.

The pupil nurse, particularly, immature and unused as she is to long hours of rigorous duty, is prone to display lowered resistance to infection and to contract more or less serious illnesses that incapacitate her for duty. Streptococcic sore throat, upper respiratory infections, furuncles, gastro-intestinal disorders and even far from trivial cardiac or nephritic disease are conditions observed too frequently among nurses.

Significant evidence of the statistical truth of this fact is the recent announcement of a large life insurance company that henceforth in the disability clauses, which state that in the presence of complete incapacity premiums are avoided and a monthly payment made to the policyholder, the cost will be tripled in the case of the nurse. Such an action may be statistically and economically justified on the part of the company, but it is certainly a hardship on the nurse whose meager income usually makes financial preparation for a future illness difficult if not actually impossible.

In seeking a solution for this problem appeal to the insurance company obviously offers no hope, since its action is based on actual morbidity records of large numbers of nurses. Perhaps the practice of better preventive medicine by the hospital would spare young women in training some of these disabling experiences. Perhaps a more careful physical scrutiny of those admitted to schools of nursing would be more fair to the school, to the student and to the profession.

The least the hospital can do is to provide for the nurse proper living conditions, a reasonable number of hours of duty and efficient medical attention during training. If these measures should result in ultimate improvement of the health record of nurses, perhaps life insurance companies would no longer look on this profession as one characterized by unusual disability hazards.

Talking It Over

THE syndrome to-day called paralysis agitans is known to the older physicians as Parkinson's disease, James Parkinson, an English physician (1755-1824), having written the first classical description of the condition in 1817. He is remembered as the first to write a description of appendicitis in English (1812). Radical, reformer and political agitator, he was in constant difficulty with his government, but this did not prevent his making noteworthy contributions to medicine, geology and paleontology.

* * *

WHEN we talk about modern innovations, why is it that no one mentions the bathtub? A hundred years ago it was a decided novelty. In 1842, a citizen of Cincinnati built a bathtub and gave a Christmas party to his men friends, every guest taking a bath. The press railed against this evidence of softness; the medical profession solemnly proclaimed that the use of bathtubs would predispose to rheumatism and tuberculosis; special taxes were imposed on bathtubs, and in Boston it was declared illegal to take a bath without a physician's order. This "bathtub law" was repealed in the year 1862.

* * *

"WHEN we no longer look at an organic being as a savage looks at a ship, as something wholly beyond his comprehension; when we regard every production of nature as one which has had a long history; when we contemplate every complex structure and instinct as the summing up of many contrivances, each useful to the possessor, in the same way as any great mechanical invention is the summing up of the labor, the experience, the reason, and even the blunders of numerous workmen; when we thus view each organic being, how far more interesting—I speak from experience—does the study of natural history become!"

This quotation is taken from the concluding chapter of Darwin's "Origin of Species by Means of Natural Selection." This great thought revolutionized the science of biology and gave a momentum to surgery that will persist until the end of time. Darwin studied, he observed, he thought. We of the hospital field will do well to follow his example.

* * *

HERNANDO CORTEZ, the conqueror of Mexico, erected the first hospital in the Western Hemisphere in 1524. The Duchesse d'Aguilon established a hospital in Canada in 1639. Manhattan Island, New York, was the site of the first hospital in the United States in 1663.

Dr. L. A. Sexton, president.

Paul H. Fesler, president-elect.

All Parts of Country Represented in New Orleans Program

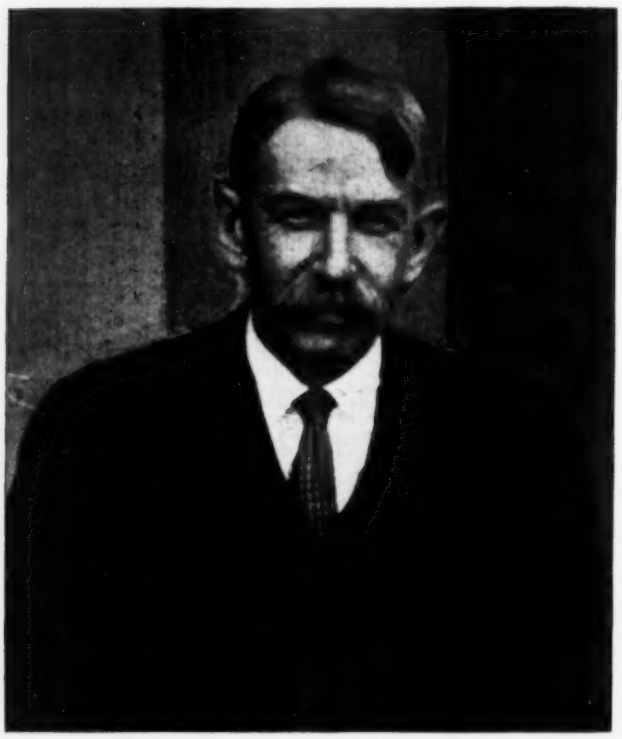
Paul Fesler Chosen President-Elect

SOUTHERN hospitality, that wonderful quality that is so often referred to in the North, was actually on display in all of its varied forms at the New Orleans meeting of the American Hospital Association and the meetings of allied associations held October 20 to 24. The attendance at the meeting was larger than was expected by even the most optimistic and the program which on paper shaped up well proved to be even better than it read. Dr. Bert W. Caldwell, executive secretary of the American Hospital Association, reported that there were more hospitals represented at the meeting than had been the case for several years past and that there were fewer disappointments from people who had been assigned places on the various round tables and at the sessions.

Business, politics, pseudopolitics, social activities and excellently attended sectional meetings were the order of the week in the South. Paul H. Fesler, superintendent, University of Minnesota Hospital, Minneapolis, was elected president defeating Robert E. Neff, superintendent, University of Iowa Hospital, Iowa City; Asa S. Bacon, superintendent, Presbyterian Hospital, Chicago, was reelected treasurer. Dr. Nathaniel W. Faxon, director, Strong Memorial Hospital, Rochester, N. Y., was reelected a trustee, and the Rev. Maurice F. Griffin, Cleveland, was elected a trustee. Richard P. Borden, Union Hospital, Fall River, Mass., who has for many years served as a trustee of the association refused to consider another term and to the regret of those interested in the welfare of hospitals retired from active participation in the association. Mr. Borden has given untiringly of his time and ability in the interests of better hospitalization and his retirement from the board will be a distinct loss.

New Orleans offers so many amusements to its visitors that it would be difficult to describe them all. Its unusual restaurants, the French Market, Antoine's and other places were crowded with hos-

pital administrators during the entire week. Sightseeing busses and private cars took delegates to the gambling resorts, to the quaint old cemeteries and to other points of interest. On Wednesday as guests of the association more than seven hundred hospital executives enjoyed a de-



Richard P. Borden.

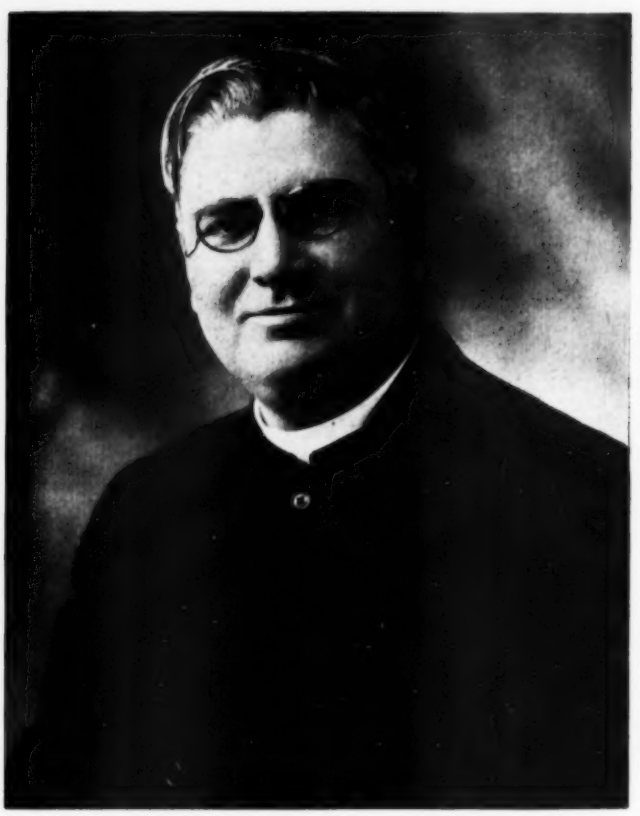
lightful river ride on the *S. S. Capitol.* The entertainment features of the trip were in charge of the New Orleans Hospital Council.

A breakfast of the hospital associations of Illinois, Wisconsin and Indiana was held on Tuesday morning at which time President Christopher G. Parnall and President-Elect Lewis A. Sexton were the principal speakers. On Wednesday morning the Hospital Association of Texas held a breakfast which was well attended. The Tennessee hospital group also met at a breakfast on Wednesday morning. Thursday noon both the Michigan Hospital Association and the Hospital Association of Pennsylvania held luncheons. There were in attendance at the meeting of the Rotary Club on Wednesday noon more than 125 hospital administrators and exhibitors who are Rotarians. Robert Jolly, superintendent, Baptist Hospital, Houston, Texas; Louis J. Bristow, superintendent, Southern Baptist Hospital, New Orleans; Asa S. Bacon, superintendent, Presbyterian Hospital, Chicago, President Parnall and others spoke. On Tuesday noon Doctor Caldwell spoke before the Kiwanis Club. On Monday several amendments to the constitution were introduced but all of them were later withdrawn.

One of the many agreeable features of the meeting was the exhibit which in many respects outdid anything of its kind before. There were many new items on display in the commercial exhibit and several new organizations were present showing their wares. The educational exhibit was the best that has ever been arranged and it was to be regretted that more of those present did not gather in this obscure part of the hall oftener. The architectural exhibit was outstanding in every way, as was also that conducted by Charlotte Janes Garrison for the Hospital Library and Service Bureau.

Much speculation was rife as to where the convention will go next year. Toronto, Cleveland, Milwaukee, Indianapolis, St. Louis and Louisville, Ky., were among the lively contenders for the meeting and most of these cities had their representatives on the grounds, while all of them passed out literature and badges.

Besides the officers noted above the following were elected to vice-presidencies: first vice-president, G. W. Olson, California Hospital, Los



Father Maurice F. Griffin.

Angeles; second vice-president, Muriel McKee, Brantford General Hospital, Brantford, Ont.; third vice-president, Dr. Lucius R. Wilson, John Sealey Hospital, Galveston Texas.

During the course of the convention various speakers paid tribute to the late Col. William Colby Rucker, whose untimely death last May is

mourned by all who knew him. Doctor Rucker was medical officer in charge of the United States Marine Hospital, New Orleans, and vice-president of the American Hospital Association. Doctor Parnall in his presidential address, the board of trustees in its report, read by Doctor Caldwell, and others made reference to the loss the association has sustained in Doctor Rucker's death. His memory was again honored at the open meeting of the trustees' section Tuesday night, when his picture was presented to the board of trustees, on behalf of the Hospital Council of New Orleans, by Dr. T. B. H. Anderson, who succeeded Doctor Rucker at the Marine Hospital. E. S. Gilmore, Wesley Memorial Hospital, Chicago, received the gift on behalf of the trustees.

The first general session of the convention on Monday evening was open to the public and besides a crowded attendance of members of the association and their guests there were present many citizens of New Orleans interested in the problems the association is trying to solve. The program was broadcast over Station WWL,

Robert E. Neff.

through the courtesy of Father Abel of Loyola University.

The main speakers of the evening were Julius Rosenwald, Chicago, and Dr. C. G. Parnall, medical director, Rochester General Hospital, Rochester, N. Y., president of the American Hospital Association. On the program there also appeared His Grace, the Rev. J. W. Shaw, D.D., Archbishop of New Orleans; Alfred D. Danziger, who represented Gov. Huey Parham Long; Mayor T. Semmes Walmsley of New Orleans, and the Rev. William McF. Alexander, Prytania Presbyterian Church, New Orleans. A delightful musi-

Louis J. Bristow.

cal program was contributed by prominent musicians of New Orleans.

Mr. Rosenwald's address, "The Hospital From a Business Man's Point of View," was striking and must have impressed everyone interested in public welfare. He searchingly scrutinized the nationwide work of the hospitals and urged the need for fewer charitable facilities and more opportunity for the man of average means to obtain hospital service at a price within his ability to pay. Mr. Rosenwald feels that the number of pay patients should be increased and the number of free patients decreased. He also thinks that hospitals should find a way to keep one-third of their bed capacity from being idle, as, he stated, is the case this year. "In almost every large city," he said "hospitals are clamoring for expansion, despite the great number of unused beds already available. In addition to the immense sums asked annually for maintaining the present plants, over two hundred million dollars in contributions and taxes are put each year into new hospital buildings and equipment. You will

agree that it is a public duty to require the most complete use of existing facilities before we enlarge these expensive institutions."

In his presidential address, Doctor Parnall censured the policy observed by many hospitals of expanding beyond community needs and criticized as unsound the vast government program providing additional hospitals under the direction of the Veterans' Bureau. Doctor Parnall's address appears in full as the leading article in this issue of THE MODERN HOSPITAL.

The Monday afternoon session was a business session, when the reports of the committees were presented by the chairmen of the committees.

Most of these reports are in printed form and may be obtained by applying to the headquarters of the association.

The Social Service Section

On Tuesday morning the first of the sectional meetings was held when the social service section met, with Elizabeth Lowry, Rochester General Hospital, Rochester, N. Y., presiding. Dr. Lewis A. Sexton, Hartford Hospital, Hartford, Conn., president-elect of the association opened the discussion in this group and brought the greetings of the parent association.

Following Doctor Sexton on the program was Edith Baker, president, American Association of Hospital Social Workers, director of social work, Washington University and Allied Hospitals, St. Louis, with a paper entitled "The Present Trends of Medical Social Work."

The major emphasis in the practice of medical social work has been placed upon case work with individual patients, Miss Baker said. Social study, the gathering of pertinent information about the personality, social relationships and physical environment of patients are essential if the hospital is to render adequate service to those it accepts for care.

"The social elements in the admission of patients to hospital and clinic are becoming increasingly recognized," she said, "but they have not as yet been clearly defined with regard to the participation and organization of social service in relation to the admitting process. If the present trend to place social workers in admitting service continues, the solution of the problem as to what constitutes thorough training for them must eventually be sought by the education committee, American Association of Hospital Social Workers."

A discussion of this paper by Dr. Malcolm T. MacEachern, American College of Surgeons, Chicago, followed.

"Admitting as a Social Problem," the second paper on this program was presented by Dr. Elizabeth Wisner, professor of sociology, school of social work, Tulane University.

"The eligibility of patients to city and county hospitals has been a matter of concern to the taxpayers and the medical profession," Doctor Wisner said. "Institutions under private auspices receiving city subsidies or contributions from the community chest have also felt the pressure to standardize and relate their particular service to the community needs. With the mounting costs of medical service, we know how technical and complicated has become the rating procedure of the free, part-pay and pay patient."

The changed conception from "pauperism" or "destitution" as a basis of eligibility to that of "inability to pay for the necessary medical care" is of special interest to the social worker and marches along with her own changed concepts from "less eligibility" to "adequacy" in social treatment.

Doctor Wisner discussed the admitting practices found in various institutions throughout the country, pointing out that few hospitals now measure eligibility by destitution, but find it advisable to admit certain patients on a part-pay basis.

Dr. Charles C. Bass, dean of Tulane medical school, in discussing Miss Wisner's paper, said that he thought one of the weaknesses of medical education and hospitals where medical work is taught is any insinuation that patients at a charity hospital should be treated differently from those in a private infirmary.

He believes that the proper machinery to govern admissions should include social service.

Social Service in Kentucky Described

"The Medical Social Worker in a Public Institution," was the subject of the concluding paper of this session, by Pauline Parr, Louisville City Hospital, Louisville, Ky., read in her unavoidable absence by Miss T. H. Saoul, St. Louis Children's Hospital, St. Louis.

Miss Parr traced the progress of the medical and hospital movement in Kentucky, and described the founding and growth of the Louisville City Hospital, an institution caring for the city's indigent sick, and affiliated with the University of Louisville.

She also described the duties of the social service department of the hospital: directing patients within the building; giving general information; placing ambulance calls; supervising volunteers, and supervising special activities such as those for Easter and Christmas.

The social workers take care of financial investigations and handle the clinic management in

many of the clinics. The work they do within the hospital is chiefly with patients referred for discharge. The most persistent problem is the homeless chronically ill, she said. The social workers are also active in work for crippled children, for diabetic patients attending clinics, for psychopathic cases and for persons suffering from eye diseases.

Interest Centers Around Round Tables

On Tuesday, Wednesday and Thursday mornings three round tables were held concurrently, at which the coordinators and associate coordinators were, respectively, Dr. W. L. Babcock, Grace Hospital, Detroit, and G. W. Olson, California Hospital, Los Angeles; Dr. R. C. Buerki, State of Wisconsin General Hospital, Madison, and Asa S. Bacon, Presbyterian Hospital, Chicago; Howard E. Bishop, Robert Packer Hospital, Sayre, Pa., and Dr. Malcolm T. MacEachern, American College of Surgeons.

Interest this year centered around these three series of round tables, each of which held three separate sessions. In arranging the program, care was taken to see that none of the three presented conflicting subjects and this forethought enabled hospital administrators to attend such sessions as seemed to be of greatest benefit to their hospital. The attendance at these sessions —particularly on Tuesday and Wednesday— proved to be even larger than was anticipated, while the attendance on Thursday was smaller, giving the program arrangers for next year a clue by which to be guided.

At Doctor Babcock's round table on Tuesday, group nursing as a means toward the reduction of the cost of illness was discussed by L. C. vonder Heidt, West Suburban Hospital, Oak Park, Ill., and E. Muriel Anscombe, Jewish Hospital, St. Louis.

Mr. Vonder Heidt described the plan of group nursing in effect at his hospital and pointed out that it had met with success, the average for a four-year period showing a small surplus and this with approximately a 55 per cent average annual occupancy. Group nursing is carried on in one eighteen-room unit of the hospital, with twelve graduate nurses and one supervisor. The nurses receive $125 a month, with board and laundry, rooming out at their own expense. The working schedule calls for eight hours of service a day, eight nurses doing day duty, two night duty and two relief.

Group nursing must be definitely confined to some particular section of the institution and cannot be practiced promiscuously throughout the various patient floors, Mr. Vonder Heidt said.

Miss Anscombe stated that in her opinion group nursing is both feasible and practical and is probably the best method of supplying good and inexpensive care to the patient of moderate means. She believes also that it helps to control the supply of student nurses and may permit more selectivity among them. Graduates, she feels, should welcome the system as it reduces their working day by four hours. Another of its advantages is that it gives the nurse an opportunity to study disease more intensively, for with group nursing the nurse has many different types of cases to study. Miss Anscombe discussed the different methods of establishing the system in different institutions and stressed the importance of having proper utility rooms and proper working units. Group nursing is here to stay and to reduce costs, she believes.

Doctor Babcock told how the group nursing system is carried out at his institution, where the service has been in existence for three years and the nurses are on eight-hour duty. John Smith, Hahnemann Hospital, Philadelphia, James R. Mays, New York City, and Jessie J. Turnbull, Elizabeth Steel Magee Hospital, Pittsburgh, contributed to the discussion of this subject.

A Study on Nursing Costs

A study of nursing costs with or without a school by C. F. Neergaard and Alexander M. MacNicol, New York City, and R. W. Brough, superintendent, Homeopathic Hospital, East Orange, N. J., was presented by James R. Mays, New York City.

Conclusions of those making the study were as follows: It is more expensive to operate a hospital without a training school than with one. The higher cost without a school represents fifty-three cents a day more for each patient. Assuming an average per capita operating cost of $5 a patient day in the general hospitals of this country, this would represent an increase of 10 per cent in the cost of hospitalization where graduates were substituted for students. Feeding, housing and maintenance are major items in the nursing costs—$622 annually for each nurse in hospitals with schools and $647 in those without.

The study was undertaken at the request of a general hospital in New York City that is planning a program of expansion that will involve an entirely new plant and an increase in capacity of from 150 to 300 beds. Eight hospitals, two of which were operated without training schools, furnished their 1929 figures as a basis of comparison.

While the study is too limited in scope to be conclusive it is believed that the institutions and

the figures they presented represent a sound picture of nursing costs in a fair cross section of general hospitals of from 100 to 300 beds.

This paper was discussed by Dr. May Ayres Burgess, director, Committee on the Grading of Nursing Schools, New York City. Miss Turnbull and Laura Logan, dean, Cook County Hospital School of Nursing, Chicago, also spoke.

The next subject considered was "What Provision Should We Make for Guest Accommodation and Meals in Our General Hospital?" Discussion of this topic was introduced in a paper by George Sheats, Baptist Hospital, Memphis, Tenn. Mr. Sheats said at his institution there were two floors entirely given over to guest rooms and their popularity was evidenced by the fact that since these were opened two years ago the percentage of occupancy had been 98. These rooms are for the use of relatives and friends of patients, for obstetric patients, for convalescent patients and for the use of doctors who may bring patients to the hospital from distant points. No nursing attention of any kind is given to the occupants of the guest rooms, with the exception of the obstetrical patients. The rooms are exactly like the hospital rooms. Mr. Sheats believes it is a distinct advantage to establish a commercial restaurant in the building.

That the hospital should provide every accommodation it can without interfering with the care of its patients was the gist of the discussion by Dr. Lucius R. Wilson, John Sealy Hospital, Galveston, Tex., on "Guest Accommodations."

Doctor Buerki's Round Table

The first paper at the round table on the topic, "What Is Your Hospital Contributing to Community and Medical Education?" was given by C. J. Cummings, Tacoma General Hospital, Tacoma, Wash. Mr. Cummings discussed the hospital's obligation to its local community.

"Considered in its larger aspect, the great and primary contribution of the hospital to its community is the alleviation of suffering, the maintenance of health and the cure of disease," said Mr. Cummings. "There are, however, certain definite contributions every hospital makes to its local community: education, whereby the standards of medical and nursing practice are raised to benefit the health of not only the immediate community, but society in general; commercial enterprise, by which the hospital pays out large sums of money for supplies and for salary and wages that find their way back into the channels of trade; as a community center for service along the lines of public health and general welfare."

Paul Fesler, University of Minnesota Hospital, Minneapolis, spoke on what his hospital had been doing for the better training of interns and his paper was discussed by Dr. Harley Haynes, University of Michigan Hospital, Ann Arbor, Mich. Both men are connected with teaching hospitals and each told of the close cooperation between the medical school and the hospital in the placing and training of interns. Their problems were not the problems generally faced by the smaller institutions but much interest was manifest over the manner in which each of these Midwestern institutions fostered better intern training.

Following the discussion, Dr. Willard Rappleye, medical education committee, New Haven, Conn., spoke on the hospital's contribution to the advancement of science in medicine.

"Most hospitals," said Doctor Rappleye, "obviously cannot conduct research in all the divisions of medicine, but on the staff of most hospitals there are a few men interested in advancing our knowledge of some problem of diagnosis or

Dr. R. C. Buerki.

treatment whose efforts should be encouraged and supported. These efforts of themselves are a vitalizing influence in the hospital program out of all proportion to the contribution which such efforts are likely to make to the science of medicine. The value of these contributions is not their number, but the accuracy with which they are made.

"Medicine is not alone a biologic science; it is a social science as well. We are too prone to think that all contributions to medical knowledge must come from laboratories. The greatest problems before medicine to-day are economic and social."

The discussion on Doctor Rappleye's paper was opened by Robert E. Neff, University Hospitals, Iowa City, Iowa.

The next question for discussion, "What is your hospital doing to improve efficiency by the routine training of personnel?" was presented by J. B. Franklin, superintendent, Georgia Baptist Hospital, Atlanta, Ga.

The first step in choosing the hospital personnel, said Mr. Franklin, is to choose carefully and to select only persons of ability and adaptability for the particular tasks to be done. When the right persons have been found, pay them an adequate salary to make the place worth while for them. Pay for a high quality of service and, in the right spirit, demand it.

An operating room supervisor, a floor supervisor and an obstetrical supervisor may be trained by selecting a likely student nurse. After she has received the regular routine training in all departments, then she should choose the operating room, floor supervising or obstetrical supervising as her elective for about three months. Following her graduation she should be sent to a well known hospital for postgraduate work, after which she will be thoroughly equipped for her work.

Mr. Bishop's Round Table

At Mr. Bishop's round table on Tuesday morning, the opening speaker was Dr. George A. MacIver, City Hospital, Worcester, Mass. His subject was "The Credit Department."

Doctor McIver defined the function of the credit department as follows: to convert hospital operation into revenue as far as is consistent with the charitable purpose of the hospital. In other words, to determine the rate that shall be paid by those receiving hospital care; to secure payment thereof; to make adjustments when they are proper and to employ consistent and orderly methods in carrying out these methods. The organization required to carry out this function must, he said, be made up of three components: the admitting unit; the reviewing officer, or credit manager; the cashier and clerical assistants.

Doctor McIver then described in detail the duties of each of the three units of the department, showing how they may be combined to produce an effective plan for the credit department.

The second paper on this round table was "Costs and Charges," given by J. B. Franklin, superintendent, Georgia Baptist Hospital, Atlanta, Ga.

"It is impossible," said Mr. Franklin, "to make accurate comparisons of costs in different hospitals, without first classifying the hospitals. Costs are determined by a number of factors, but chiefly by the type and quality of service rendered.

"For the individual hospitals, cost figures are most important. A hospital can compare its own costs with previous costs to great advantage.

Dr. Nathaniel W. Faxon.

"Each hospital should know what it is actually costing to take care of a patient in a ward bed, by the day, and in a semiprivate and private room. It should know the cost of its raw food, served food, laundry, cost per surgical operation, cost for linen, water, heat and power. By comparing such costs from month to month, the superintendent can detect any excessive expense or any lowering of costs, and by having this information can tell whether any department is operating at a loss.

Robert Jolly, Baptist Hospital, Houston, Tex., ably discussed revenue and costs.

The best way to meet deficits in operation is not to have them, he said. Certain changes in operations may obviate deficits: a change in the ratio of ward beds to room beds; increasing the

charges on beds by twenty-five cents a day; a charge of $1 or $1.50 a day for newborn babies; changing the methods of laboratory charges; a small increase in charge for the use of birth rooms and operating rooms.

The best way to increase endowment is by direct appeals for donation and by annuity bonds, he continued.

To the question, "Is it ethical and legitimate for a hospital to have accessory sources of revenue in addition to receipts from patients, special departments and endowments?" Mr. Jolly answered affirmatively. Some of the sources he named as follows: drug store, beauty parlor, flower shop, pay telephones, radio, garage, supplies to doctors, reducing machines, and others.

Doctor Babcock's Round Table

Dr. Babcock was coordinator at the round table on "Problems of the Patient of Moderate Means."

The discussion was opened by a paper by Dr. S. S. Goldwater, consultant, New York City, read in the absence of the author by Dr. J. B. Howland, Peter Bent Brigham Hospital, Boston. Doctor Goldwater analyzed the effort that hospitals have made so far to deal with the problem of providing adequate care at a cost in keeping with modest incomes.

As a relief measure he suggested a system of insurance or mutual aid. Insurance against sickness and especially against hospital costs would introduce in the budget of the family of modest means an item that could be borne without great hardship. It is amazing, he said, that so little has been done in this direction in a country where voluntary life insurance is almost universally practiced and where accident insurance has been popularly accepted for years.

Doctor Goldwater's paper on this subject will appear in full in an early issue of THE MODERN HOSPITAL.

Robert Jolly, Baptist Hospital, Houston, Tex., followed Doctor Goldwater. He criticized persons of moderate means who paid little attention to their annual budget, making few if any provisions for illness costs. To educate these persons, the hospital has an educational job ahead of it, he said.

The hospital also needs to educate the physicians, he continued, not to send every person who needs medical attention to the hospital. Since it is easier for doctors to see their patients in a hospital, they often send them there indiscriminately. They should be sure that their patients need hospital service first.

The discussion was taken up at this point by J. B. Franklin.

The entire solution of the problem of providing care for patients of moderate means is not an obligation of the hospital, Mr. Franklin emphasized. The individual himself can help by making provision for sickness in his monthly expense budget and by choosing accommodations within his income. Philanthropists can help by special gifts to maintain beds and by general endowments to hospitals; doctors can help by cooperating with hospitals in limiting their fees and hospitals can help by providing accommodations and service at graduated prices to suit the pocketbook of the patient. This service can be furnished in ward beds, semiprivate beds and in small private rooms, all at a cost considerably below the usual hospital charges.

Probably the wisest plan, said Mr. Franklin, is to provide a separate building for this type of patient. Only a few hospitals however can afford a separate building. But many hospitals can designate certain wards, semiprivate and private rooms for such service and fix the prices according to the cost of maintaining such accommodations, or at rates below the usual charges.

The discussion that followed was taken part in by Dr. Frederic A. Washburn, Massachusetts General Hospital, Boston, who spoke of the work being carried on at the Baker Memorial, the pavilion of his hospital devoted to the care of patients of moderate means. He said that the vast majority of those coming to Baker Memorial for care earn from $1,200 to $3,000 a year. Others who discussed the subject were: Dr. W. S. Rankin, the Duke Foundation, Charlotte, N. C., L. J. McKenney, trustee, Highland Park Hospital, Highland Park, Mich., Dr. R. W. Richardson, Macon Hospital, Macon, Ga., W. G. Christie, Presbyterian Hospital, Denver, Doctor Howland, Elizabeth H. Shaw, St. Margaret Hospital, Pittsburgh, Doctor Babcock, W. Hamilton Crawford, South Mississippi Infirmary, Hattiesburg, and Dr. Henry Hedden, Methodist Hospital, Memphis, Tenn.

Social Service in the Small Hospital

Advantages of social service to the small hospital was the next topic considered at this round table. Dr. J. Moss Beeler, Spartanburg General Hospital, Spartanburg, S. C., was the first speaker. He described in detail the physical plant and organization of the institution of which he is superintendent and indicated what should be the relation of the social worker to the hopsital, to the physician and to the public. He pointed out the responsibility of the social worker in helping the patient to adjust himself to his situation in the hospital and in helping the family to get the

right mental attitude in facing the circumstances surrounding sickness. It is a part of the social worker's duty to classify patients so that the hospital may be enabled to grade its charges appropriately, he said. He also pointed out that the social service worker keeps down the cost of the hospital by keeping out many charity patients through preventive work and noticing symptoms early in the development of a disease. She is a link between the hospital and the community. Doctor Beeler's paper was discussed by Doctor Rankin.

The Wednesday morning continuation of Doctor Buerki's round table opened with a discussion of special features for the improvement of maternity care by Jessie J. Turnbull, Elizabeth Steel Magee Hospital, Pittsburgh.

Maternal mortality has not decreased appreciably in the last few years, Miss Turnbull pointed out, although a greater percentage of prospective mothers have had hospitalization at the hands of specialists. Hospitals, therefore, have a great responsibility in this respect, and are constantly evaluating their methods and improving them.

Maternity Care Discussed

Special features that are employed by hospitals to improve maternity care may be divided into two main classes—construction and the actual management of the patient. The outstanding features in construction include: adequate space and equipment for prenatal clinics; smaller wards with greater space per bed; separate isolation department; control of noise in the birth rooms and nurseries by acoustical treatment of walls and ceilings; increased facilities for scrubbing hands; smaller nurseries with adjoining rooms for "suspect" cases; nurseries for premature infants, equipped with special, heated cribs.

Jessie F. Christie, superintendent, Chicago Lying-In Hospital, discussed the remarks of Miss Turnbull and also outlined some of the provisions for better care that will be found in the new Chicago Lying-In Hospital which will be opened soon.

Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital, Cincinnati, the next speaker, discussed special features employed in hospitals to improve pediatric care.

The functions of pediatrics, said Doctor Bachmeyer, are the care of well and sick infants and children; the education of parents and families concerning the prevention of disease and the preservation of the physical and mental health of their children; the instruction of undergraduate and graduate medical students and nurses in managing well and sick children and in promoting investigation. For some of these activities the hospital is largely responsible; in others it is a cooperating agency; in still others it furnishes the field in which specially trained persons work. The hospital then is the principal factor in the care of the sick child and it may or may not be the place for coordinating work for a well child.

The organization and personnel of the pediatric department of a hospital will depend to a certain extent upon whether or not it is a teaching institution. The amount of time consumed in the medical administration of a large department of pediatrics, especially if it is a teaching one, makes it almost essential that it be done by someone devoting the major portion of his time to it.

Doctor Carter on Contagious Disease Problem

The third speaker on this program was Dr. Fred G. Carter, Ancker Hospital, St. Paul, Minn., with a discussion of the best method of handling the problem of contagious disease in a general hospital.

"The rule that closes the doors against contagious diseases fails in its purpose even if it is rigidly enforced," said Doctor Carter. "Patients may be admitted with erroneous diagnoses; a visitor suffering from a mild attack of a contagious disease may impart that disease to the patient he visits; an individual entering the hospital for treatment for another malady may be incubating a contagious disease.

"The only alternative in the solution of the problem, then, is the application of accepted methods of combating the dissemination of such diseases. Immediate isolation for all cases of a suspicious nature is mandatory."

The concluding subject was presented by Dr. Walter E. List, superintendent, Jewish Hospital, Cincinnati, who touched upon the things that every hospital could do to stimulate better prenatal and postnatal care. The Minneapolis General Hospital where Doctor List was superintendent for many years before going to Cincinnati holds a record for hospital born babies and Doctor List outlined what methods had been used in instructing expectant mothers before entering the hospital and also the follow up work on all maternity cases. Mrs. Kate Jackson Hard, superintendent, Saginaw General Hospital, Saginaw, Mich., discussed Doctor List's paper and explained that much the same procedures were followed in hospitals located in the smaller centers.

Dr. B. C. MacLean, superintendent, Touro Infirmary, New Orleans, gave the first paper at Mr. Bishop's round table on "Medico Administration in Hospitals" on Wednesday morning. It was a discussion of an acceptable standard procedure for the admission of patients.

Doctor MacLean described the routine of admissions from the out-patient department to the public wards. The advantages to the doctor in such instances, he pointed out, are the opportunity to discern the correctness of diagnoses of patients referred to the wards, the right to sign insurance papers and death certificates and the chance to gain consent for autopsies.

The routine of admission to private or semi-private accommodation, he said, was by the direct to room method or through the admitting office. The direct to room method consists of making the reservation in advance, leaving the admitting slip at the information desk, following which the patient is sent direct to his room, is received by the floor nurse and statistical data are then obtained. When the patient is received through the admitting office he is interviewed by a nurse or clerk who must have common sense, tact, personality, a sympathetic attitude, general medical knowledge and a sensible social viewpoint.

Doctor Wilson Speaks on Staff Organization

How the medical staff should be organized to function efficiently was the theme of the second paper at this meeting which was given by Dr. L. R. Wilson, John Sealy Hospital, Galveston, Tex.

The staff of a hospital in a small community can develop a better organization on a unit rather than on a departmental basis, Doctor Wilson said, since little opportunity to specialize is offered its physicians. A yearly election of officers, with honors distributed among the staff, should be one of the requirements with regular meetings at least once a month to review case work and to discuss matters of interest to the staff.

The staffs of larger hospitals can be better organized on a departmental basis, with the chief of each department in full control of his staff. In addition to this organization, the entire visiting staff should be organized for its regular meetings to discuss case reports and matters affecting the staff as a group.

The part of the medical staff in assuring the scientific character of case records was discussed by Dr. W. P. Morrill, director, Maine General Hospital, Portland.

As one step in obtaining good records, Doctor Morrill suggested the organization of the staff by sections, with a definite and responsible chief of each section. This chief can and usually will gradually build up the records of his department if he receives sufficient encouragement and assistance from the administration of the hospital.

The record room should be convenient to the main traffic route of the staff members. It should be well and pleasantly equipped and the personnel should be carefully chosen. There should be at least one of the personnel who is a good medical stenographer and at least one, preferably the head, who can encourage the laggards of the staff to a higher standard of performance. The records must likewise be indexed and cross indexed so that any reasonable information sought by the staff shall be promptly available.

Dr. J. J. Moore, National Pathological Laboratories, Chicago, followed Doctor Morrill with the subject of staff conferences. Doctor Moore who directs several laboratories in hospitals of Chicago told of the importance both from the clinical record angle and the better care of the patient of holding regular staff conferences at a stated time when each member of the staff would go over the month's or week's work and explain just what had been done. He emphasized the fact that these meetings were worthless unless each member was willing to lay all of the cards on the table and cooperate whole-heartedly with the hospital and the staff organization. He advocated that the pathologist and other heads of clinical departments be present at these conferences.

Selecting Staff Members

The sixth paper at this meeting was presented by Boris Fingerhood, United Israel Zion Hospital, Brooklyn, N. Y., and was entitled, "Appointments and Promotions on Medical Staffs."

Mr. Fingerhood pointed out that the selection of hospital staffs, particularly those unaffiliated with teaching institutions, is a difficult problem. Many times staff members are appointed because of financial and social connections, rather than because of any special fitness they show for the position. This is doing the public an injustice, he emphasized, and lay boards should be influenced only by a desire to obtain the best talent available for the hospital.

To remedy the situation Mr. Fingerhood suggested that qualifications the physician aspiring to a hospital appointment must meet, should be clearly set forth upon the basis of which trustees can gauge the merits of the applicants. This would require the creation of a competent committee that would grade physicians so that the lay board would have explicitly defined standards whereby to judge them.

Dr. Frederic A. Washburn, director, Massachusetts General Hospital, Boston, opened the discussion on "Decentralized Professional Services in Large Hospitals: Admitting, X-Ray, Operating Room, Obstetrics and Delivery Services," at Doctor Babcock's round table on Thursday.

Doctor Washburn began by pointing out that large general hospitals may be subdivided by the financial status of the patient or by disease, expressing himself as being in favor of the former plan, although, he said, some of the older hospitals have a mixture of the two plans. The private hospital, the hospital for patients of moderate means and the general hospital should, insofar as practicable, be a unit in itself, he contended, each hospital having its own services with the exception of such central services as lighting, heating, mechanical and repairs, stores and laundry. The central professional service that cannot well be subdivided is that of the laboratories, pathological and bacteriological, metabolism, cardiac and research laboratories and emergency ward.

It is better for all concerned, he said, if each hospital group has its own admitting office.

The next subject of discussion was decentralized services in large hospitals. The first speaker was Dr. William H. Walsh, Chicago, who touched on the subjects of food distribution, laundry service and linen and bedding. Dr. E. T. Olsen, Receiving Hospital, Detroit, contributed to the discussion of this important topic.

The question of whether the government should continue to build new hospitals for World War veterans or utilize the empty beds in general hospitals was discussed by Dr. Harley A. Haynes, University Hospital, Ann Arbor, Mich. There is a potential group of more than 4,000,000 veterans entitled to full medical care at the expense of the government, he said, and with the men at an average age of thirty-five years they will be increasingly subject to illness. The peak load of hospitalization will not be reached until 1945.

Appointment of a committee to study this problem was recommended at this meeting.

Problems of Occupancy Arouse Interest

At the last session of Doctor Buerki's round table held on Thursday morning the first speaker was Dr. L. H. Burlingham, director, Barnes Hospital, St. Louis, Mo. He took as his subject "What Can an Active, Sympathetic and Cooperative Staff Do to Assist in Maintining 100% Occupancy?"

In answering this question, Doctor Burlingham cited the record of Barnes Hospital in maintaining an average occupancy of 83 per cent over a period of six years. An analysis of 1,556 admissions to the hospital showed that 27 per cent were not due to a physician and that 73 per cent were due to a physician. Of the 73 per cent, 53 per cent were recommended by staff physicians and 20 per cent were recommended by other than staff physicians.

The Barnes Hospital Society, established in 1925, has been the means of maintaining a high rate of occupancy, he said. The members (1) support the policies of the trustees and assist administrative officers in carrying out their plans, (2) encourage a devotion to investigation and the teaching of medicine among its members, (3) seek the good will and support of the community for the hospital and (4) promote a spirit of good will and cooperation among the society members.

This was discussed by Dr. Donald M. Morrill, superintendent, Blodgett Memorial Hospital, Grand Rapids, Mich., and many others because of its great general interest at this time. Many hospitals have found a decline in occupancy so that this subject was of more than passing interest.

Human Element Must Not Be Forgotten

Why maintaining a high quality of service is essential to a successful hospital was the theme of the paper given by F. O. Bates, Roper Hospital, Charleston, S. C.

The secret of the high quality of service that is essential to a successful hospital is the coordination of all departments from the administrative office to the obscure carpenter shop, he emphasized. They must all work in complete harmony for the good of the patient. "We must not forget the human element," he said. "We should let it sway us always. We must as vigilantly supervise the patient's case as many seem to supervise the patient's bills. Our enthusiastic striving for scientific improvement and experimentation must be guided by a sympathetic consideration of our patients. The hospital, the practitioner and even the medical society, are interdependent units; when they function in unison as a harmonious whole, many of our difficulties will be solved, our institutions will be better served and the patient will reap the highest type of service."

Louis J. Bristow, superintendent, Southern Baptist Hospital, New Orleans, discussed Mr. Bates' remarks and told of the various successful practices that he had found in both the Baptist Hospital in New Orleans and other Baptist hospitals throughout the South.

Meeting the psychology of each patient was discussed by Dr. Henry Daspit, City Hospital for Mental Diseases, New Orleans, and the same topic was discussed by Dr. Nathaniel W. Faxon, Strong Memorial Hospital, Rochester, N. Y. Both men told of the strides that are being made in improved care of mental patients both in specialized hospitals and in general hospitals and of the extreme care that is being given as compared with that of a few years ago.

More consideration for the patients' pocketbooks was the general theme of the last speaker who was E. I. Erickson, Augustana Hospital, Chicago. Special charges, their possible inclusion in the regular bill, ideas for giving more service and other pertinent points were brought out by both Mr. Erickson and L. C. Austin, Mt. Sinai Hospital, Milwaukee, who discussed the paper.

Nursing Administration Proves Live Topic

The last session of Mr. Bishop's round table was held on Thursday morning and the general subject discussed was nursing administration in hospitals. Paul H. Fesler, University of Minnesota Hospital, Minneapolis, first spoke on the financing of nursing education. Mr. Fesler said that the time was not far distant when nurse education would be a matter for the state to handle and that the utilization of state universities for this purpose seemed to be the logical method of procedure. Laura R. Logan, dean, Cook County School of Nursing, Chicago, discussed Mr. Fesler's remarks.

Before any attempt is made to state with exactness the method of financing nursing education, studies should be made of the minimum number of hours of practical experience a student requires in her undergraduate training, Miss Logan said. This minimum is as important as the maximum. A study should be made of the real value, from the educational point of view, of work that has a definite present value and is therefore governed by forces present in paid positions, and of work lacking in these same forces that have for their aim solely the education of the student for work of future value.

"What Constitutes Efficient Bedside Nursing Care?" was the subject of the second paper at this meeting. It was presented by E. Muriel Anscombe, Jewish Hospital, St. Louis.

Miss Anscombe discussed her subject from a viewpoint of supervision, the ratio of nurses to patients, the hours of duty and the maintenance of a standard technique. That hospitals, not nurses, control nursing service and education was emphasized by Miss Anscombe. Nursing care must first of all be carefully supervised. The most essential quality of the supervisor is leadership. Efficient nursing service is based upon the ability of the supervisor to inspire others to follow her directions explicitly. Supervision does not mean direction from a centrally located desk or orders issued from a bulletin board. The attitude of the supervisor should be that of working with her students. This does not mean that her work is essentially of the same type but rather that they are interested in a common cause—the welfare of the patient.

The actual ratio of nurses to patients is difficult to compute, Miss Anscombe said, depending upon the type and size of the ward, as well as the conveniences provided for working. She said it was her opinion that every supervising nurse ought to have an assistant for every twenty to twenty-five patients, if she hopes to have any time to devote to the teaching of her students. "I do not believe," she added, "that one can place student nurses upon the different wards, with the needs of the patients in mind, unless graduate nursing service is added to stabilize the work."

Helen Munson, assistant editor, *American Journal of Nursing*, followed Miss Anscombe with a discussion of a student nurse health service.

A study of thirty-three nursing schools showed that the average student nurse last year lost 6.7 days in illness, an amount of time almost equal to that lost by the average individual in the United States, Miss Munson said. This is perplexing, since students are highly selected from the standpoint of health and live in an atmosphere devoted to the preservation of health.

Measures used in several well known schools to reduce sickness and promote health were outlined by Miss Munson as follows: a rigid selection of students, with a physical examination under the auspices of the school before admission; annual health examination; immunization against diphtheria, scarlet fever, typhoid and smallpox; an eight-hour day, in which some schools also include classes; occasional days of rest when necessary; ward maids, general duty nurses and better supervision to reduce overtime; single rooms to ensure quiet and privacy during free time; better food; a school physician with an interest in preventive medicine; supervised recreation; development in the student of an attitude that she is responsible for her own health.

Mrs. Ewing Speaks From Professional Viewpoint

The essentials and content of graduate courses for nurses was the subject discussed by Mrs. Nan H. Ewing, R.N., principal, school of nursing, Ravenswood Hospital, Chicago. The speaker said that she approached the subject from the professional viewpoint. Graduate professional nursing education cannot be put on a satisfactory educational basis until undergraduate nursing education becomes stabilized. There seems to be little difference at present between graduate clinical courses and affiliate clinical courses. The faculty in many cases, particularly the nursing faculty, is often unprepared to meet the demands of nurses seeking higher education along practical

lines. Equipment is often meager. More stress is placed on clinical material than on the interpretation of it and the supervision of the nursing care. Mrs. Ewing said that many reputable hospitals are using graduate nurses as students and are thereby getting all of their actual nursing care done at practically no cost and that they give in return thirty or forty hours of class work. There seems to be little need to pauperize graduate nurses who are perfectly able to pay their way, she said. If we are to educate nurses properly, we must first decide on definite standards for undergraduate education for nurses and build our specialization on intensive lines. Graduate education for nurses, that is, clinical education, will require a professionalized system that cannot be introduced until undergraduate nursing education comes into its own, the speaker said.

Small Hospital Meeting Draws a Crowd

The small hospital section meeting on Tuesday afternoon attracted a large crowd. It was under the direction of Clarence H. Baum, Lakeview Hospital, Danville, Ill., chairman, and Howard E. Hodge, Decatur and Macon County Hospitals, Decatur, Ill.

How a 125-bed general hospital, operated not for profit, can maintain a high type of service at prices the patient of moderate means can afford to pay and at the same time operate the hospital without a financial loss, was discussed by Ralph M. Hueston, Silver Cross Hospital, Joliet, Ill., in a paper, "Comparing Policies Which Govern the Success of a Hospital."

Two major sources of losses in the management of a hospital, he pointed out, are to be found in the system of charges for service rendered and in the purchase and distribution of supplies. Many hospitals, he said, have found that it pays to have a one price policy. The bed rate should be called down to as near cost as possible, while the charge for extra services should show a substantial profit. Administrators also should give careful consideration to the purchase and distribution of supplies.

Mr. Hueston then described certain changes in policies that one 125-bed hospital had made that had turned its losses into profits. The bookkeeping department was revised; the system of purchasing and distributing supplies was investigated; the laundry equipment was reconditioned; changes in personnel were lessened; the laboratory service was strengthened; the school of nursing was improved and a closer cooperation between the medical staff and the administration was brought about.

L. C. Austin, Mt. Sinai Hospital, Milwaukee, spoke on "The Absorption of Special Charges," using the screen to present the statistical tables with which he illustrated his paper.

Mr. Austin told of what had been done at his hospital toward absorbing and reducing special charges and pointed out that reducing special charges is a big problem that could easily be solved if all hospitals were standardized so that they might work on the same basis in figuring their per capita costs.

That the graduate nurse should supplant the student in small hospitals is the belief of Agnes O'Roke, R.N., Crippled Children's Hospital, Louisville, Ky.

Medical students gain their experience in large clinics and by seeing a large variety of cases, said Miss O'Roke. Then why not the same for the student nurses? The small hospital cannot give the student the broad training and experience she needs, Miss O'Roke pointed out as she cited several instances of smaller hospitals that have recently and satisfactorily made the change from student nursing to graduate nursing. Most superintendents admit that a training school in a small hospital costs more than graduate nurse service, but they feel they are serving their community better. One hospital admits that in three years it has made a saving of $5,000 by the use of graduate nurses.

Methods of Identifying Babies Listed

A paper on "The Practical Application of Social Service in the Small Hospital," by Frances Eaton, Holyoke Hospital, Holyoke, Mass., was read in her absence by Beatrice Hodge, Charity Hospital, New Orleans. The paper dealt with the work of the social service department as it is carried out at Holyoke Hospital.

Dr. J. T. Nix, Hotel Dieu, New Orleans, next delivered an address on "The Heart of the Hospital," in which he stressed the importance of organizing a hospital so as to secure courtesy, kindness and efficiency for the patients. Every member of the personnel, from the admitting clerk to the superintendent, he said, should strive to increase the patient's welfare and comfort and no curt answers should be countenanced in a hospital. Staff conferences should be held and every member should be assigned his task so that there may be good team work.

Various methods of identifying the newborn were discussed in a paper written by Anna Koenig, Mt. Sinai Hospital, Chicago, and read by Howard E. Hodge, Decatur and Macon County Hospital, Decatur, Ill.

Among the methods in use Miss Koenig mentioned the following: the lettered bead system;

Above, Dr. Frederic A. Washburn, who opened the discussion at the Thursday morning session, and Dr. W. L. Babcock, coördinator of one of the round tables. Below, Dr. Donald C. Smelzer, chairman of the out-patient department section, and Bertha E. Beecher, chairman of the dietetic section.

tagging both the mother and the baby; labeling the baby with a wrist tag; taking the foot prints of the baby before it leaves the birth room and the finger prints of the mother while in the birth room; adhesive tape on the back of the baby, with the patient's full name, number and sex on it; a birth certificate on which the mother's forefingers are inked and pressed beside the footprints of her child.

Miss Koenig then described the methods in use at her own hospital.

The Tuberculosis Section

Dr. Joseph R. Morrow, medical director, Bergen County Hospital, Ridgewood, N. J., presided at the meeting of the tuberculosis section which was also held on Tuesday afternoon. Grace E. Watson, R.N., director of nursing education, Jersey City Hospital, Jersey City, N. J., opened the meeting with a paper on "The Hospital as a Center for Health Education With Special Reference to Its Application to Tuberculosis." She stated that recent statistics show an increasing occurrence of tuberculosis among nurses. Her paper was discussed by Dr. J. A. Myers, University of Minnesota, Minneapolis.

"Food Service to Bed Patients," was next discussed by Dr. C. L. Bellis, Muirdale Sanatorium, Wauwatosa, Wis., who said that food service in hospitals for the tuberculous must receive the attention it has long merited and must take its place with other healing aids.

Dr. E. S. Mariette, superintendent and medical director, Glen Lake Sanatorium, Oak Terrace, Minn., traced the history of the sanatorium movement from its early beginnings down to the present time, closing with a prophecy as to what the sanatorium of the future will be like.

The factors that make the modern sanatorium popular, such as its location, its modern construction and equipment, its medical and nursing facilities, its dietary facilities, its social service program, its diversional activities, such as occupational therapy and reading and other forms of amusement, will all be carried to higher degrees of efficiency in the future than they are to-day, Doctor Mariette said.

As a result of the more scientific care and treatment, a larger percentage of our honest prospects will be returned to industry. As sanatoriums increase in medical and surgical efficiency, they will serve more and more as diagnostic centers where borderline cases may be studied over as long a period of time as is necessary. In addition to this the sanatoriums of the future will make a larger provision for the care of the tuberculous child than they have in the past. This will include a provision for a more complete educational program while the child is hospitalized in the sanatorium as well as for a more complete medical service during the same period.

The sanatoriums of to-day, by providing diversional activities, such as occupational therapy and an adequate library, have done much to break the monotony of cure taking; but the sanatoriums of the future will go further and provide the same form of positive mental training for the older individual that is now provided for the child. An educational program, either academic or vocational, will tend to conserve and foster the work habit and will fit the patient mentally to meet the demands of the economic world as far as the capabilities and resources of the community permit, the speaker said.

What social workers had accomplished in Nashville, Tenn., in tuberculous cases was stressed in a paper by Mary Ratterman, Vanderbilt University Hospital, Nashville, Tenn. Dr. Horton R. Casparis, professor of pediatrics, Vanderbilt University School of Medicine, in discussing Miss Ratterman's conclusions, brought out the responsibility of citizens generally in the fight against tuberculosis and spoke of the big part social workers played in tuberculosis control.

Trustees' Section Open to the Public

A public session of the trustees' section was held on Tuesday night. It was featured by significant addresses, all stressing the need for medical and hospital care for every American citizen who needs it, at a price he can afford to pay. Those who spoke were Judge Charles Rosen, president, board of trustees, Touro Infirmary, New Orleans, who presided at the meeting; Gov. Bibb Graves, Montgomery, Ala., and Dr. Stewart R. Roberts, Atlanta, Ga.

In his opening address Judge Rosen advanced health insurance as a tentative remedy for the economic ills of hospitals. He pointed out obstacles but urged that it be given a trial. He traced the history of compulsory health insurance systems in foreign countries and described some attempts at similar legislation in the United States. "Neither federally nor by any state in the Union," he said, "has any plan of health insurance been adopted as yet, although investigations in a number of states have resulted in reports recommending such legislation and bills based on these recommendations have been introduced repeatedly in New York, California, New Jersey and elsewhere. In each instance such bills have failed to obtain enforcement." In conclusion he said that some system of health insurance might work to the advantage of both physicians and the

public and might offer a partial solution for the problem of caring for the sick man of moderate means.

Governor Graves' address had the same theme. "America is going to have the necessary hospitalization for ever American citizen," he told the members of the association. "This is the most important question that can come before you. America stands ready to follow your judgment as to how this hospitalization should be provided. Far be it from any layman to come in and say what the plan should be, what the state should pay or what the individual should pay. We are asking you to point the way and if you don't, someone else will."

Following Governor Graves' address, Doctor Roberts spoke on "Multiple Cares and Costs." Medicine as a social service to the whole community and the need of not curbing the freedom of the private practice of the physician so as to command the fullest coperation from him for the needs and opportunities of to-day and to-morrow were emphasized by Doctor Roberts, who also stated that practically half the American people are not getting the care and service they need. He analyzed the hospital service of the country and the auspices under which it is administered, and said that the medical profession needs the glare of publicity, so that its problems, trials and triumphs as well as its services, may be known.

What We Spend for Health and for Autos

Doctor Roberts pointed out that a medical personnel of one and one-half million persons are in medical work in this country, including 143,000 physicians, 67,334 dentists, 151,996 practical nurses and 2,600 hospital superintendents. Added to this large group he estimated another, much larger, of 1,081,000 persons, including 200,000 trained nurses, a hospital personnel of 550,000 and other assistants and technicians. The cost of medical care is nearly three billion dollars a year, he said, while the nation's income is ninety billions. He pointed out that the United States spends six times as much for passenger automobiles in a year as for doctors, and remarked that this seems strangely little for health and life and cure of disease. He quoted figures showing an annual expenditure for nongovernment medical service of $2,130,000,000 or an average of $80 per family per year. In contrast to that he quoted figures showing nonmedical expenditures of $11,700,000,000, or an average of $436 per family per year.

Asa S. Bacon, Presbyterian Hospital, Chicago, who was scheduled to address the gathering on "The Hospital's Contribution to Public Welfare," moved that the meeting be adjourned because of the lateness of the hour and the motion was adopted.

In the course of the evening some delightful musical numbers were contributed by New Orleans musicians.

Miss Beecher Presides at Dietetic Section

"The Work of the Consultant in Nutrition and Diet Therapy," was the subject of the first paper given at the dietetic section, Wednesday morning. It was presented by Fairfax T. Proudfit, University Hospital, Memphis, Tenn. Bertha E. Beecher, Christ Hospital, Cincinnati, was chairman.

The consultation field in dietetics is not confined to the work of the consultant in nutrition and diet therapy only, Miss Proudfit said. The commercial world has awakened to the fact that women trained and experienced in the use of equipment and having daily to solve the problems incidental to the running of an efficient dietary department are more likely to understand the needs of such departments than the outsider whose experience is with the production end only. Architects and builders, manufacturers and food producers are therefore availing themselves of the services of these well trained dietitians, whose expert advice probably saves them thousands of dollars as well as gives better satisfaction to their customers.

The dietitian in the field of nutrition and diet therapy was probably the first to assume the rôle of consultant, possibly because the need for her assistance was more personal, and possibly because her scientific training and practical hospital experience made her the logical link between the patient and the physician, the hospital and the home, so far as the question of dietary adjustments were concerned.

Among the obstacles that often block the path of the dietitian who seeks to do consultation work, Miss Proudfit mentioned lack of recognition, lack of financial backing and lack of personality. Unless the dietitian is known for her ability and valued for her assistance by the physicians with whom she hopes to carry on her practice, she will find it impossible to make much progress as a consultant in diet therapy. With a sufficient income to take care of her overhead expenses while she is proving herself to the medical profession and to the public, she will be able to give her best efforts to her work; without this financial backing she must supplement her consultation practice with other work or give it up entirely. Hampered by a lack of personality, neither training nor experience, financial backing nor professional recognition will suffice to make a successful consulting dietitian, Miss Proudfit concluded.

"Menu Planning for a General Hospital," was next presented by Mary Smith, chief dietitian, Baptist Hospital, Houston, Tex.

The complicated problem of menu planning for a general hospital was summed up as follows by Miss Smith: a sufficient number of calories; the proper balance of food substances; variety and surprise in the menus; consideration for the help's time and limited equipment; the best food for the least money. Experience, she said, teaches a dietitian to estimate the caloric value of a menu almost at a glance, and the proper balance of protein, fat and carbohydrate and sufficient mineral and vitamin content in the diet are determined in much the same way.

Miss Smith also pointed out that it was necessary for the dietitian to be familiar with the food habits of many classes and to recognize the importance of variety and of the element of surprise in the planning of meals. The employees' hours off duty must be considered and the amount of oven space and steam kettle capacity borne in mind. Nor must there be overlooked the question of how to serve the best food without exceeding the per capita allowance. Market prices must be studied and compared. The utilization of fruit juices from canned fruits, of the outer stalks of celery, of bread crusts and of leftovers must also be carefully planned.

Miss Titus Speaks on the Nurse and Nutrition

Following Miss Smith, a paper on "The Dietitian and the Public Health Nursing Program" was given by Shirley C. Titus, dean, school of nursing, Vanderbilt University, Nashville, Tenn. Miss Titus stressed the importance of nutrition in the public health program. Malnutrition, she said, is as prevalent in rural as in urban communities and any community health program must take cognizance of this fact and make proper provision for solving this health problem. The gospel of nutrition and dietetics must be spread by the public health nurse, Miss Titus holds, for the new conception of the function of the nurse is that she is a health educator as well as a remedial agent, and dietetics should occupy a more important place in the nursing curriculum than it does to-day. Every effort should be made to enrich the content of this subject and to improve the methods of teaching it. Nurses must be taught in such a way that their interest in all phases of dietetics will be aroused. Every nurse working in a rural community should be able to give to the country housewife practical advice and aid in the selection, preparation and service of the family dietary, Miss Titus declared. If the public health nurse is to function properly, she must interest herself in food problems and acquire the ability to handle them skillfully.

S. Margaret Gillam, director of dietetics and housekeeping, University Hospital, Ann Arbor, Mich., as leader of a round table on hospital problems, discussed the standards for dietitians and the methods of serving special dishes to patients. Anna E. Boller, Rush Medical College, Chicago, contributed to the discussion, outlining the educational requirements for dietitians and explaining why these standards had been adopted. Gwendolyn S. Taylor, Touro Infirmary, New Orleans, spoke on food service in her hospital.

The Construction Section

The general session of the construction section on Wednesday afternoon was opened with the reading of the report of the committee on hospital planning and equipment by Dr. Joseph B. Howland, Peter Bent Brigham Hospital, Boston. This was followed by a technical discussion of design, material and equipment of hospitals. The report was full of valuable suggestions of a practical nature of interest to every hospital administrator and to every architect. It was discussed and additional suggestions were offered by Doctor Washburn, Doctor Howland, Doctor Morrill, Doctor Sexton, Mr. Borden, Doctor Burlingham and Perry W. Swern, architect, Berlin & Swern, Chicago.

"Common Errors in Hospital Construction," was the title of the next paper on the program, contributed by Fred M. Walker, Duval County Hospital, Jacksonville, Fla. Mr. Walker emphasized the need for making a survey before building a hospital, the survey to cover the number and kind of hospitals already existing in the community, the population, the different classifications of individuals who might be counted on to patronize the hospital and other points. Before proceeding far a competent consultant should be engaged, he said. Among common fundamental errors to be guarded against he named a misconception of the need for a hospital; failure to engage a consultant; the selection of a site because it has been donated or may be obtained cheaply or for any other reason than its suitability for the purpose in mind; the engagement of a local architect unless he is experienced in hospital construction; a too extravagant design.

Oil as Fuel Recommended

Following Mr. Walker, Dr. Henry Hedden, Methodist Hospital, Memphis, Tenn., gave a paper on "Oil as a Fuel for Hospitals and Institutions." Doctor Hedden said that investigation had shown that the supply of oil in this country

is almost inexhaustible. Advantages of oil over coal as a fuel were listed by the speaker as cleanliness, freedom from dust, no ash, reduction of boiler room labor, no smoke, more even heat and more efficient burning. He told of the equipment needed and described its installation and maintenance. Superior to oil as a fuel is natural gas, Doctor Hedden said. Natural gas is now available and hospitals might well consider its advantages, he said.

The Teaching Hospital Section

The lusty infant of the American Hospital Association, the teaching hospital section, took on greater importance than ever before in its few years of life. In addition to the regular session which was held on Wednesday afternoon a luncheon was also held at the Hotel Roosevelt on Tuesday noon which furnished informal discussion. It was attended by twenty of the teaching hospital executives representing every part of the United States and many universities. California, Colorado, Pennsylvania, Western Reserve, Wisconsin, Minnesota and many other schools of medicine were represented.

Dr. Willard Rappleye of the committee on medical education outlined at the luncheon the present trend toward some type of state medicine and told what was being done either to shape its development or to curb the tendencies. A discussion of intern placement and training followed and general remarks were made regarding the professional "set-up" of the intern organization within the hospitals.

On Wednesday afternoon Paul Fesler, University of Minnesota Hospital, Minneapolis, presided as chairman of the teaching hospital section. Doctor Parnall was present and brought the greetings of the American Hospital Association to the teaching group.

Following Doctor Parnall's message, Dr. W. D. Stovall, director, State Laboratory of Hygiene, Madison, Wis., spoke on "A Training Course for Clinical Laboratory Technicians."

There are not enough clinical pathologists to direct the laboratories in half of the accredited hospitals in this country, despite the requirements of the American Medical Association and the American College of Surgeons, Doctor Stovall said. These laboratories, most of them, have a nominal director who is perfunctory in his attention to them. They are operated by so-called laboratory technicians, young women who have had little background in the medical sciences and frequently only meager technical training.

The need for clinical laboratory technicians is then apparent. They cannot take the place of a clinical pathologist but with a proper background in the medical sciences and good technical training they can conduct a laboratory in which the common tests and determinations are carried out.

Some laboratories are directed by clinical pathologists. In these laboratories the services of technicians are required to carry out the more or less mechanical part of the work. Technicians for such work require no background in the medical sciences. They must have, however, a thorough familiarity with the methods used in carrying out the common laboratory tests.

It is apparent, therefore, that training courses for two types of clinical laboratory technicians are needed—one course organized to give to the student with a university degree in the medical sciences a familiarity with the organization of hospital laboratories and the technique employed to carry out the tests. The training for the other type of technician should be confined to the teaching of technique only.

Doctor Stovall concluded his paper by outlining the details and organization of both types of courses.

This was followed by a general discussion from the floor with many present expressing their views on the possibilities for such a course of training.

The teaching hospitals in the field of occupational therapy was the next topic brought up and Gertrude Semple, Edward Hines, Jr. Hospital, Hines, Ill., read a paper in which she told of how the Veterans' Bureau Hospital at Hines had worked out a program for occupational therapy and added her suggestions as to how teaching hospitals could cooperate with all hospitals in furthering the cause of occupational therapy.

Doctor Burgess Speaks on Nurses' Training

The university's responsibility in the training of nurses, the last topic at this section meeting, was discussed by Dr. May Ayres Burgess, director, Committee on the Grading of Nursing Schools, and Robert Neff, University of Iowa Hospitals, Iowa City, Doctor Burgess approaching the subject from the standpoint of the nurse and Mr. Neff, from the standpoint of the hospital.

In her paper, Doctor Burgess pointed out that since the university is a school and the hospital is not, universities will not be permanently contented to copy what the good hospitals are doing. They will be setting up new standards for the hospitals to follow. It is hoped that universities will be able to discover ways and means of coordinating theory and practice in nursing education and particularly of deriving, through the

wise use of the practice field in the school of nursing, an education that shall be of college grade.

This, she said, would seem to demand: a separate school within the university, or, if it must be a department, membership in a school that can be trusted to work energetically for better standards in nursing; a nursing faculty, wisely selected, with particular emphasis upon familiarity with modern nursing techniques; an arrangement whereby the practical work of the student nurses can be directly controlled and supervised by the university—in other words, an arrangement by which the school of nursing of the university shall be responsible for providing the entire nursing service of the university hospitals, either under a system of dual control, or under a carefully worked out contract, agreed upon by both sides.

Doctor Faxon Presides at Administration Section

Hospitals must more completely integrate their out-patient department and their ward service if their efforts in behalf of their patients are to be of the greatest and most lasting value to the patients, according to John E. Ransom, Johns Hopkins Hospital, Baltimore, who opened the administration section on Thursday afternoon with a paper entitled "A Dispensary Functioning as the Front and Back Doors of a Hospital."

The extent to which the out-patient department of a hospital can be made to function as an admitting department and the extent to which it can be utilized for the treatment of patients subsequent to their discharge from the wards were points considered in this excellent paper. The hospital experience of a ward patient differs from that of a private patient primarily in that it lacks continuity with the service the patient has been receiving in the out-patient department, because the out-patient physician loses all contact with the patient as soon as he enters the hospital. The patient is in contact with a new medical régime while he is on the ward and passes entirely from it on his discharge. Mr. Ransom urged greater continuity in the service to the patient as he passes from clinic to ward and back again to clinic. Were it possible for the out-patient department physician to follow his patient into the ward and have him return to his clinic for discharge from the ward, greater benefits would accrue to both patient and physician, he said. There would also be a saving in both time and expense. While admitting that there are obstacles to the carrying out of such a plan in the majority of hospitals, Mr. Ransom suggested that the situation might be improved by requiring hospital ward patients to present themselves first at the out-patient department for examination to determine whether they needed to be hospitalized or could be cared for in the out-patient department. In other words, a hospital could admit all of its ward patients through the out-patient department, with the exception of emergency cases. The patient's O. P. D. record should be available while he is on the ward. The best means of making it available is to incorporate it in his hospital record. It might also be well to discharge practically all patients through the out-patient department, he said.

Mr. Ransom's paper was discussed by John C. Dinsmore, University of Chicago Clinics and Hospital, J. B. Franklin and Doctor Faxon.

Whether all general hospitals should be "general" in fact as well as in name was the topic of

J. B. Franklin, who took part in several round table discussions.

the second paper on this program. It was presented by E. L. Slack, Samuel Merritt Hospital, Oakland, Calif. He said it was his opinion, with reservations, that they should be.

"This question probably was suggested with two thoughts in mind," he said. "Are hospitals discharging their obligation to their communities? Are administrators overlooking an opportunity to increase the occupancy rate?"

Mr. Slack pointed out the ways in which the general hospital was in many instances broaden-

ing its service to receive patients who in the past were required to enter special hospitals. For many of these patients, the general hospital serves as a diagnostic center; for others it has developed special facilities for their treatment that often prevent their being committed to a special institution.

"We should continue every earnest effort to make available to the masses, at a cost within the keeping of their income, all branches of respectable and satisfactory hospital and medical service," he concluded.

Small Hospital Can Be Education Center

"The Small Hospital as an Educational Center for the General Practitioner" was discussed by Dr. Wann Langston, administrative officer, University of Oklahoma School of Medicine and Associated Hospitals, Oklahoma City.

Doctor Langston quoted a number of medical authorities to show that every hospital, large or small, has an educational duty to the members of its staff and to the physicians of the community. A strong and close staff organization and supervision are not only attainable but essential, he pointed out. The small hospital should also extend to the general practitioner the privilege of practicing in the hospital. In return, the physician owes the hospital the duty of conducting himself in an ethical and professional manner, in keeping with the regulations of the hospital. A complete clinical record of the patient must be kept, which is as easily acquired in a small as in a large hospital.

When there is only one hospital in a county, Doctor Langston said, all members of the medical society may be members of the staff and all members would be eligible to attend staff conferences at the hospital. In this way the small hospital can furnish continuous postgraduate work to all physicians who care to avail themselves of it.

Cooperation With Outside Agencies Urged

Constance B. Webb, director of social service, Lakeside Hospital, Cleveland, spoke on "Hospital Social Service in Its Relation to Community Welfare Agencies."

Mrs. Webb quoted from recent studies to show that an inherent intimacy should exist between the case worker within the hospital and welfare agencies outside. The hospital social worker, she said, must have a thorough appreciation of her own function; she must have an ability to analyze a given situation to determine whether to carry it herself, or by whom and at what point it should be carried elsewhere; she must be familiar with the functions of other agencies; other case workers must understand the medical-social implications of a situation so carried by them whether alone or jointly; the nonmedical case worker must understand and appreciate the function of the hospital social worker.

No social service department can hope to carry on all its cases alone, Mrs. Webb said, without the help of outside agencies any more than the doctor can treat all his cases alone. The social worker in the hospital must know and use the other agencies just as the physician knows and uses other professions and technicians.

Following Mrs. Webb on the program was Dr. John A. Hornsby, University of Virginia Hospital, Charlottesville, Va. His subject was "Some Special Problems of Southern Hospitals." Doctor Hornsby traced the origin and evolution of the private hospital in the South, which, he said, shows courage, enterprise and determination. He discussed Southern hospital architecture, saying that colonial architecture is entirely unsuited for a hospital and should be abandoned. Southern communities about to build a new hospital, he said, are too prone to summon a Northern architect to help them plan the hospital. This is a mistake, he feels, for Northern architects know nothing of the economic necessities of the South, of the climate, of the color line in the hospital staff and in the patients, of the problem of vermin and pests common in the South, all of which have an important bearing on the type of hospital that will be adequate.

The Patient of Moderate Means Again

"Nurses, Patients and Hospital Pocketbooks," was the subject of the last paper presented at the administrative section meeting by Dr. Lucius R. Wilson, John Sealy Hospital, Galveston, Tex.

"The acute situation now existing in the nursing profession could be materially relieved by eliminating all schools of nursing that do not maintain an educational standard by which only qualified nurses could be added to the profession," he said. "This will require legislative attention and the setting of minimum education standards along the lines adopted by schools of medicine."

Doctor Wilson discussed the problem of the middle class patient who wishes to pay for his care but cannot. The hospital should employ every method of lowering hospital costs without curtailing service. Cooperation of staff members is essential. Long term credit for the patient will also help, and hospital insurance offers a possible solution.

Nor must the hospital pocketbook be over-

looked, he said. He suggested various ways of improving the financial situation of the hospital, one of which is accurately informing the public on the cost of hospital care. Hospital directors should avail themselves of every oportunity to speak and write on this subject, he said.

"When the public realizes that hospital care, while expensive, is cheaper when its service is considered alongside other services offered to-day, money will come in sufficient amounts to enable the hospital to carry on," Doctor Wilson concluded.

Resolutions Committee Reports

At the conclusion of the meeting of the administration section a general session was held, President Parnall in the chair. This general session was opened with a report of the resolutions committee, read by Mr. Fesler, chairman of the committee. Resolutions lamenting the death of Doctor Rucker; expressing appreciation of those who had helped to make the convention a success and commending the long term of service of Trustee Richard P. Borden, were adopted. A resolution endorsing the National (Negro) Hospital Association was referred to the board of trustees for final action, after a lengthy debate on the floor.

A motion by John Olson, Prince Bay, N. Y., requesting the board to investigate the advisability of creating association orders of merit for past presidents, past trustees and other persons "conspicuous in the hospital field" was passed and the board was asked to report at the next convention.

Ruling on Hospital Whisky Condemned

Immediately before the adjournment of the meeting, Doctor Hornsby made a motion which was adopted, urging the board of trustees of the American Hospital Association to take action to have the prohibition forces give a more liberal interpretation of the law regarding the use of whisky in hospitals. "The present interpretation permits a doctor to prescribe only one dose at a time for the patient and forbids any whisky being carried on ambulances, even in an emergency case," Doctor Hornsby declared. He pointed out that this ruling is unreasonable as patients in need of whisky must depend on other doctors when their physicians are not present and the average hospital drug department is open only eight hours each day.

The out-patient section met on Thursday afternoon under the chairmanship of Dr. Donald C. Smelzer, Graduate Hospital of the University of Pennsylvania, Philadelphia. Dr. Charles Hedges, Babies' Hospital, New York City, was secretary.

Dr. Herman Smith, Michael Reese Hospital, Chicago, presented the report of the out-patient committee which was based on a study of the adequacy of the actual medical care of dispensary patients.

O. P. D. Section

In the first paper presented at the out-patient section meeting, Dr. Samuel Bradbury, medical director, out-patient department, Pennsylvania Hospital, Philadelphia, talked on criteria of adequate medical service in the out-patient department.

The paper was written from the standpoint of the internist, and pointed out how important the out-patient is from a public health viewpoint.

This patient, he said, may be most efficiently handled through proper organization of the medical staff, assistance to the medical men and the proper management of the patient and his record. The chief of each service should regularly attend his out-patient clinic, he said, and all staff members should have both in-patient and out-patient duty.

All information that has been acquired concerning the patient should be placed before each physician who sees the patient. The record should include a diagnosis for each clinic visited, evidence of progress under treatment, evidence of environmental study and evidence of some disposition of the patient.

Statistics, he concluded, should include the individuals per year, the new and total visits per month for each clinic with the total income and income per visit in each clinic. The cost should also be known, preferably upon a per visit basis.

Discussion on Doctor Bradbury's paper was opened by John M. Smith, Hahnemann Hospital, Philadelphia.

Frederick MacCurdy, Vanderbilt Clinic, New York City, illustrated his talk on "Unified Patient Admission" by lantern slides. He was followed on the program by Dr. Peter D. Ward, Amherst H. Wilder Dispensary, St. Paul, Minn., who discussed the paper. Dr. Basil C. Mac Lean, Touro Infirmary, New Orleans, spoke on "Dispensary Scope and Responsibilities," and Ruth Emerson, director, medical social service, University Clinics, Chicago, discussed "The Social Worker in Relation to Patient Management." A discussion by Dr. George A. Herrmann, Charity Hospital, New Orleans, and the election of section officers closed the program.

The nursing section met Thursday evening, Claribel Wheeler, director, school of nursing, Washington University, St. Louis, presiding. The first paper was given by Phoebe Kandall, R.N., B.S., professor of nursing education, Colorado

State Teachers College, Greeley, Colo., and dealt with the desirability of supplementing student service with graduate nurses. Miss Kandall spoke of the training and the recreations needed by the nurse and said that the use of graduates improves, strengthens and stabilizes the nursing service in the hospital. Doctor MacEachern discussed Miss Kandall's paper.

Estimating Nursing Costs

Dorothy Rogers, McMillan Hospital, St. Louis, was the second speaker on this program, with a discussion of the cost of nursing education and its relation to the cost of nursing.

"An appreciation of the function and need of nursing education," Miss Rogers said, "demands that its finances be separated from those devoted to the care of the sick and that the hospital administrator make definite provision for it in his budget.

"Perhaps the most satisfactory way of determining the cost per student per year is to estimate nursing costs in a given hospital with a graduate staff only, noting as a credit column such items as laboratories, salaries of teaching supervisors, full-time instructors, loan fund maintenance and possible assistant head nurses, which would have to be included as legitimate expenses for a school. A comparison of student and graduate maintenance would probably show slight, if any, variation. Compared with these figures would be those showing the cost of maintaining the same hospital with student nurses under education conditions.

"Further contributory factors must also be considered, such as the relative skills and rapidity of performance, the progressive nursing value of the student in the three years of her training, the cost obligation of providing equal educational opportunity to each student nurse as compared with the more commercially competitive obligation of salary paid a graduate nurse. Nine schools of the country, realizing the heavy financial burden they are carrying in their preliminary classes, have charged a tuition for the preliminary term or even for all terms, thus in a slight measure safeguarding themselves against that great number who never complete their course, as well as more adequately providing teaching facilities for those who do stay.

"It is not fair to make the patient pay for the education of the nurse. Neither is it just to the student to find a hospital assuming the responsibility of a school without making provision for it. Yet intelligent provision must come through specified budget assignments to nursing education in the hospital's annual accounting."

Dean Shirley Titus, school of nursing, Vanderbilt University, Nashville, Tenn., presented the last paper at this session. Her subject was "Group Nursing and the Welfare of the Patient."

Group nursing is merely "divisional specialing" to which has been added one or two embellishments, Miss Titus said. On the surface it appears most simple, but it leads into the most basic and perplexing problems of hospital nursing.

"An inquiry into the subject of group nursing makes one wonder if group nursing does not represent merely another attempt on the part of the hospital to saddle onto the patient nursing costs the hospital itself should meet, if this is not merely one more attempt to 'bolster up' an inadequate nursing service," she declared.

Is Group Nursing System Overestimated?

"To inquire into group nursing raises many questions: Can divisional specialing have met so great or so real a need in the hospital if after all these years it is still used on such a limited scale? If it has been used so little, why are we now going to considerable trouble to provide for it in a formal way. If the group nursing unit must be well filled at all times if the hospital is not to suffer severe financial loss, will there not be a tendency on the part of the hospital to encourage unduly the patient to occupy a bed in this unit and to remain there longer than his physical condition warrants? Is the nursing care in the group nursing unit where fifty per cent of the nurse's time is given over to another patient so much better in terms of quick service than is the quality of floor service, taking for granted that the floor care is good?"

A Careful Analysis Is Needed

"These are only a few of the many questions that make one feel skeptical about the group nursing movement," Miss Titus continued. "But with all the dangers that group nursing seems fraught with in regard to the general welfare of our patients, it will have served a great purpose if it brings about a searching examination and analysis of hospital nursing, if it brings to hospital boards, directors and medical staffs a realization that the floor service is all too frequently overloaded to a point where the art of nursing can no longer be practiced. If group nursing will accomplish that—notwithstanding all the skepticism that we may perhaps view it with now, we may yet delcare it good."

A formal routine business meeting on Friday morning brought the convention to a close. At this time Doctor Parnall, the retiring president, turned the association over to the newly elected officers.

Varied Subjects Hold Interest of Occupational Therapists

THE fourteenth annual meeting of the American Occupational Therapy Association was held in New Orleans, October 20 to 23, in conjunction with the meeting of the American Hospital Association. Perhaps, like birthday parties, the last is always the best, but the meeting was a successful one and was profitable to all who attended. Distance prevented many of the Eastern and Western members from attending, but the Middle West and the South were well represented. Since the majority of members reside in the East there was not such a large attendance as at the meeting held in 1929 in Atlantic City. The program was arranged so as to leave two afternoons and each evening free for sight-seeing in New Orleans.

The opening session was held on Monday afternoon in the municipal auditorium, with about one hundred members attending. After the meeting had been called to order by the acting president, T. B. Kidner, New York City, the members stood in silent prayer. Memorial addresses were then delivered for the two officers who had died during the year, that for President Floyd Haviland by Everett S. Elwood, National Board of Medical Examiners, Philadelphia, and that for Vice-President B. W. Carr, by Dr. Harry H. Kefauver, United States Veterans' Bureau.

President Emphasizes Need of Register

Mr. Kidner then delivered the presidential address in which he reviewed the progress made during the past year. He referred to the unfortunate tendency of certain individuals to claim to be occupational therapists when they lack the necessary qualifications. He referred briefly to the steps taken by certain organizations to guard against this form of quackery and expressed the belief that with the establishment of the national register there would be little opportunity for such conditions to continue. Through the efforts of a voluntary committee a sufficient sum had been collected to supplement the amount already raised for this purpose by the members so that the inauguration of this register would begin almost at once. He also referred to the setting up of minimum standards of training which he believed the committee in charge of that matter would probably raise still higher.

In the absence of the next speaker, Dr. Joseph C. Doane, medical director, Jewish Hospital, Philadelphia, the secretary-treasurer, Mrs. Eleanor Clarke Slagle, New York City, read his paper, "Methods of Demonstrating to the Medical Profession the Value of Occupational Therapy." In this Doctor Doane stated that if the physician is not informed concerning, or is not sympathetic toward, the contribution that occupational therapy can make, nothing is gained. He believed that the majority of practicing physicians have yet to be convinced that occupational therapy is actually curative in its tendencies and that it has emerged from an abstract psychical realm of service into a more concrete and physically useful one. He reviewed the work that had already been done and outlined the manner in which occupational therapists might "hawk their wares" to the medical profession.

Year's Work Is Reviewed

Henrietta McNary, Chicago, then read a paper of which she was joint author with Dr. John S. Coulter, Northwestern University Medical School, Chicago, entitled "The Necessity of Medical Supervision in Occupational Therapy." Again the necessity for the education of the practitioner was stressed in order that he might know the benefits to be derived from this form of treatment.

The report of the secretary-treasurer was then read by Mrs. Slagle, who reviewed in detail the progress of the year's work as seen by her office. She referred to the annual meeting of 1929, to national registration, to the condition of membership and to the many calls for advice and aid received from individuals in this country and abroad. The association's cooperation with the International Congress on Mental Hygiene and the banquet meeting held as a part of it were described. Figures were given of the placement service by means of which positions are found for properly qualified occupational therapists or they are put in touch with hospitals desiring such service. The financial summary concluded Mrs. Slagle's report.

Mrs. Slagle also read the report of the finance committee in the absence of its chairman, Mrs. Frederick W. Rockwell, Philadelphia, after which Dr. W. R. Dunton, Jr., Catonsville, Md., read the

report of the committee on publicity and publications. The session then adjourned.

The Tuesday morning session opened with the reading of a paper by Howard T. Henderson, Essex Mountain Sanatorium, Verona, N. J., entitled "The Application of Occupational Therapy on a Graduated Scale to Patients in a Tuberculosis Sanatorium" which was admirable for its specificity and clearness. It was discussed by Mrs. Gertrude Sample, United States Veterans' Hospital, Hines, Ill., Dr. Joseph R. Morrow, superintendent, Bergen County Hospital, Ridgewood, N. J., Doctor Swanger and Mr. Kidner. Dr. Mayer A. Newhauser, United States Veterans' Hospital, Alexandria, La., was the next speaker on the program, discussing the rôle and usage of occupational therapy in the treatment of actively advanced pulmonary tuberculosis. His paper was chiefly a plea for the use of occupational therapy in all types of cases of tuberculosis, including the chronic, the far advanced, the moderately advanced and the active. R. R. Rosell, National Food Bureau, Chicago, spoke on "Occupational Therapy and Vocational Training in a Sanatorium, and Their Relation to After-Care—An Outsider's Viewpoint."

Occupational Therapy in Tuberculosis

After referring to the efforts made by large industries to safeguard the purity of their products by requiring physician's certificates as to the physical health of their employees, followed by periodic examinations, he stated that the leaders of industry realize that the handicapped must be taken care of. The problem is a national one. Insurance companies and industrial concerns are doing their share, but the burden eventually passes on to those who are trained and who have the facilities to rehabilitate the patient. He recommended that more attention be given to the vocational angle and less to the diversional, and that the various utilities of sanatoriums be utilized to build up the patient's physical and mental resistance. In conclusion he briefly described the work of Tomahawk Lake Camp. Mrs. Mary L. Rowe, director of occupational therapy, Glen Lake Sanatorium, Oak Terrace, Minn., continued the discussion, "From an Insider's Viewpoint." She showed how the patient is gradually brought from light, diversional occupations to those that gradually harden him and enable him to adjust himself to vocational life. A paper by Margaret Biggerstaff, director of occupational therapy, Broadlawns Hospital, Des Moines, Ia., on "Some Problems of Organization of Occupational Therapy in a Public Tuberculosis Sanatorium," was read in her absence by Mr. Sharpnack. This was a delightfully humorous presentation of some of the difficulties encountered by an occupational therapist in selling her wares to the staff of a tuberculosis sanatorium. This was briefly discussed by Irene Grant, director of occupational therapy, Muirdale Sanatorium, Wauwatosa, Wis., after which the session upon tuberculosis closed.

Wednesday morning was devoted to the subject of the general hospital—the curative workshop. Mrs. Frederick A. Burton, chairman, occupational therapy committee, Chicago Woman's Club, spoke on plans of the Chicago Woman's Club for a curative workshop at Northwestern University. This workshop will serve as a demonstration center where the principles of reconstruction and rehabilitation can be demonstrated and disseminated. Miss McNary, the director, is a member of the faculty of Northwestern University. Instruction will be open to four groups: first, as a required course to senior medical students; second, as a postgraduate course to physicians; third, as a required subject in a course to physical therapy technicians, and fourth, as a part of a late afternoon and evening course offered under the school of education to those qualified. The latter will be "refresher" courses for which university credit will be given. This workshop is the first of its kind to be established in a medical school which gives instruction in occupational therapy with university credit.

Anita C. Blair, chairman, occupational therapy committee, St. Luke's Hospital, Chicago, gave an intimate account of her vicissitudes in inaugurating occupational therapy at St. Luke's. Those who may be discouraged by early efforts may take heart and encouragement from the experiences of this worker.

A somewhat similar account was given by Mrs. Lynn Gratiot, chairman, Junior League Occupational Therapy Workshop, St. Louis, "Occupational Therapy and a Sheltered Workshop Sponsored by the Junior League of St. Louis." She reviewed the work that had been done and showed what errors might be avoided by others who may wish to inaugurate a similar shop.

Publicizing Occupational Therapy

Elsie M. Thurber, executive secretary, Massachusetts Association for Occupational Therapy, Boston, presented a paper on "Occupational Therapy Publicity in Massachusetts," in which she described the methods used by the society of which she is an officer. A motion picture, "Fighting for a Chance," closed the session. The mental hospital session was held Thursday morning, October 23, and marked the conclusion of the meeting. Dr. C. D. Mitchell, superintendent, Mis-

sissippi State Hospital, Fondren, gave an interesting account of occupational therapy as carried on under his supervision and stated that he enthusiastically endorsed its value as a curative measure.

Dr. Isham Kimball, United States Veterans' Hospital, Alexandria, La., gave a splendid description of the relation of occupational therapy to other services under the title, "The Neuropsychiatric Service in General Hospitals With Special Reference to Occupational Therapy." This paper might well serve as a model of procedure to others.

Papers Present Practical Applications

Mary E. Black and Edith C. McPhee, State Hospital, Traverse City, Mich., then described, under the title, "Correlating Occupational Therapy and Recreation—A Marionette Show Used as a Project," how they had brought about improvement in a group of patients, chiefly schizophrenics, by interesting them in making, costuming and operating these figures. Louis J. Haas, director, mens' occupational therapy department, Bloomingdale Hospital, White Plains, N. Y., read an admirable description of the methods of applying occupational therapy to patients at Bloomingdale Hospital, which might well serve as a criterion in methods of contact and approach.

At the business meeting which was held Wednesday afternoon, the report of the committee on teaching methods was read by Marjorie Greene, dean, Boston School of Occupational Therapy, in the absence of the chairman, Mrs. Carl Henry Davis, who was kept away by illness. In this comprehensive report it was recommended that the minimum standards of training which were adopted in 1923 be increased, and the association voted to adopt the report as presented. Mr. Kidner presented the report on national registration which was also adopted, and steps will be taken to inaugurate this immediately.

This was followed by the report of the committee on nominations made by Florence M. Northrup, Michael Reese Hospital, Chicago. This report was accepted, and the following officers were elected: president, Dr. Joseph C. Doane; vice-president, Dr. Mortimer W. Raynor, Bloomingdale Hospital, White Plains, N. Y.; secretary-treasurer, Mrs. Eleanor Clarke Slagle, New York State Mental Hygiene Commission, New York City. The following retiring members of the board of management were reelected: Dr. William A. Bryan, superintendent, Worcester State Hospital, Worcester, Mass.; Mrs. John H. Hardin, Chicago; Harriet A. Robeson, Boston, Mass. New members elected to the board of management were: Dr. John S. Coulter, Everett S. Elwood, and Louis J. Haas.

More Adequate After-Care Urged at Children's Association Meeting

A meeting of the Children's Hospital Association of America was held in New Orleans on Wednesday, October 23, in conjunction with the convention of the American Hospital Association. The establishment of hospital departments which would extend to discharged patients adequate advice and observation until they are completely recovered was urged by various speakers at this meeting.

Dr. Howard Childs Carpenter, Philadelphia, president of the association, presided at the morning session. The first paper was given by Suzie L. Lyons, director of social service, Touro Infirmary, New Orleans, who talked interestingly on the subject of the importance of having an intelligent, well trained, social worker an integral part of every staff organized for the conservation of child life.

The next speaker was Dr. Charles C. Hedges, Babies' Hospital of the City of New York. Speaking on the organization of a pediatric out-patient department, Doctor Hedges recommended that records of patients should be extended beyond the time of their discharge and that hospitals should adopt more intelligent and more adequate methods of following up the recuperating patient after he leaves the hospital.

Care of Out-Patients Stressed

Dr. L. R. DeBuys, chief in pediatrics, Touro Infirmary, spoke on the management of a children's service in a general hospital. He declared that promptness is the most important factor in the care of out-patients and that efficiency should be stressed in the ward and dispensary departments. "Patients should be cared for promptly and moved in and out as quickly as possible," he said, "but the hospital should not lose sight of them after they are sent home." He also suggested that investigations of the ability of incoming patients to pay be made so that the burden of payment may be distributed fairly.

Other speakers and their subjects were: Florence J. Potts, R.N., director of nursing, Shriners' Hospitals for Crippled Children, "Prevention of Cross Infections in Orthopedic Wards"; Elizabeth Pierce, R.N., Children's Hospital, Cincinnati, "What Should the Children's Hospital of To-Day Offer in Providing a Suitable Environment for the Child?" Margaret A. Rogers, Children's Hospital of Michigan, Detroit, who spoke on convalescent homes.

Robert E. Neff, University Hospital, Iowa City, presided at a round table discussion held in the afternoon.

Round Tables Popular at Protestant Meeting

A GOOD attendance with plenty of round table discussion marked the tenth annual convention of the American Protestant Hospital Association which was held at the Hotel Roosevelt, New Orleans, on October 17, 18, 19 and 20.

The opening session had for its first speaker Walter Barnett, assistant city attorney of New Orleans, who conveyed the official greetings from the mayor of the city. The reply was made by Luther G. Reynolds, superintendent, Seattle General Hospital, and president of the association. It was followed by a most interesting paper read by Dr. B. A. Wilkes, superintendent, Hollywood Hospital, Hollywood, Calif., and president-elect of the association. He took for his subject, "The Duty of the Hospital to the Intern and the Intern to the Hospital." His paper was followed by a paper on a kindred subject, "The Medical Staff in Relation to Interns." This was given by Dr. T. Restin Heath, superintendent, Bethany Hospital, Kansas City, Kan. Following these two papers there was an interesting round table discussion on the subject, "Interns," which was led by Dr. J. H. Musser, professor of medicine, Tulane University, New Orleans.

Public Invited to Attend

A second session was held on Friday evening at which time the general public was invited. Dr. Frank C. English, executive secretary of the association, spoke on the subject, "The Perennial Program and the Association's Objective" and Dr. H. L. Fritschel, superintendent, Milwaukee Hospital, Milwaukee, and the association's historian, spoke on "Ten Years of the American Protestant Hospital Association." President Reynolds closed the session with an inspiring message in his presidential address.

Hospital Records Discussed

Vice-Pres. A. O. Fonkalsrud, superintendent, Sioux Valley Hospital, Sioux Falls, S. D., presided at the Saturday morning session and the first paper, to have been delivered by Betty Gray, Knoxville General Hospital, Knoxville, Tenn., on the subject, "Record Librarians," was read by Matthew O. Foley, editor, *Hospital Management*. Paul Fesler, superintendent, University Hospitals, Minneapolis, Minn., followed this paper with a round table on the subject of "Case Records." The round table brought forth much valuable information, and many excellent questions were propounded.

The second subject of the morning was practical economies in the hospital and the first to speak on the topic was E. E. King, superintendent, Missouri Baptist Hospital, St. Louis. He was followed by John Olson, business director, Richmond Memorial Hospital, Princess Bay, Staten Island, N. Y. Mr. Olson demonstrated his talk with several examples of economy and told of the superiorities of brass piping over other kinds and also outlined how a great deal of money could be saved in the purchasing of fuel for the hospital.

George D. Sheats, superintendent, Baptist Memorial Hospital, Memphis, Tenn., led a most instructive round table on economies. Among the speakers were Dr. Henry Hedden, superintendent,

Dr. B. A. Wilkes, Hollywood, Calif., who was installed as president.

Methodist Hospital, Memphis, Tenn., J. B. Franklin, superintendent, Georgia Baptist Hospital, Atlanta, Ga., Robert Jolly, superintendent, Baptist Hospital, Houston, Tex., the Rev. G. T. Notson, Sioux City, Iowa, the Rev. John Martin, superintendent, Hospital of St. Barnabas, Newark, N. J., and others. Cooperative buying was discussed. Several members felt that it had not proved satisfactory, while others extolled its virtues. Buying futures and the purchasing of standard brands were also discussed. All seemed to agree that buying standard brands was the safest in the long run. Following the reports of the various committees the meeting adjourned until the evening when the banquet was held at the Hotel Roosevelt.

The hospital fraternity's most popular toastmaster, E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago, was introduced by President Reynolds. Mr. Gilmore told several

Luther G. Reynolds, Seattle, the retiring president.

exceedingly humorous stories and to him was largely due the success of the banquet. Dr. Christopher G. Parnall, president, American Hospital Association, Dr. Lewis A. Sexton, president-elect, American Hospital Association and Dr. Alton Ochsner, New Orleans, were the guests of honor attending.

On Sunday afternoon the Rev. Phillip Vollmer, Jr., superintendent, Fairview Hospital, Cleveland, spoke on "The Function and Place of the Church Hospital in the Care of the Sick" and there was an open forum on "Human Relations in Church Hospitals." The remainder of the afternoon was spent in group meetings of denominational representatives of the various Protestant churches.

E. S. Gilmore, Wesley Memorial Hospital, Chicago.

The sixth meeting was held Sunday evening with an address by Bishop H. Lester Smith, resident bishop of Chattanooga, Methodist Episcopal Church, on "The Length and Breadth and Depth of Our Interest."

Mr. Fonkalsrud Elected to Office

The last session was held Monday morning at which time Mr. Foley made a report of the activities of the public relations committee. This was followed by a fine paper read by Dr. J. A. Diekmann, superintendent, Bethesda Hospital, Cincinnati. Other subjects discussed were "The Increasing Cost to the Patient of Medical and Hospital Care," and "Trend in the Schools of Nursing." There was a general round table led by Robert Jolly. At the general election of officers, A. O. Fonkalsrud was elected president-elect and Dr. B. A. Wilkes was installed as the new president.

Splendid Programs Feature A. C. of S. and Allied Meetings

FAVORED by brilliant Fall weather and attended by a large and representative number of surgeons and hospital administrators, the twentieth annual congress and the thirteenth annual Hospital Standardization Conference, American College of Surgeons, was held in Philadelphia, October 13 to 17. The Association of Record Librarians of North America and the Congress of Anesthetists convened at the same time, and throughout the week there was a constant interchange of speakers at the various meetings of these associations.

That an interesting and attractive program was presented during the five days of these meetings, is attested by the splendid attendance at each of them. Approximately 3,000 surgeons and 900 hospital administrators were registered at the headquarters of the college. On the day before the opening of the congress, a splendid array of exhibits was to be found in the various rooms set aside for this purpose, and all was in readiness at the American College of Surgeons headquarters for the active and early inauguration of work on the succeeding day.

Features of Program Were Broadcast

The Philadelphia County Medical Society, through its committee on publicity and health educaton, secured from various broadcasting stations in Philadelphia gratuitous use of almost a score of broadcasting periods, and the college was able to prepare a program which, for sheer distinction of its participants was outstanding.

The large number of hospital administrators who could find time in their busy lives to attend this conference was impressive. The possibility these meetings present to bring together members of the surgical staff and administrators of hospitals, is one that offers much toward creating a necessary understanding between these groups. In the same way the American Hospital Association could encourage a franker understanding between staff members and hospital executives by making possible the discussion of hospital problems with both the physician and the administrator participating.

The first session was opened by an address by Surgeon General Merritte W. Ireland, Washington, D. C., president, American College of Surgeons, who felt that improvement in the care of hospital patients in the past decade has taken great strides, and that, while somewhat intangible and difficult to observe, it is expressed concretely in the shortening in the average days' stay of patients. General Ireland's address was strongly tinctured with optimism and was greatly enjoyed by those who were fortunate enough to be in the audience at the beginning of the congress.

Dr. Franklin H. Martin, director general, American College of Surgeons, presented the thirteenth annual report of hospital standardization. Hospital administrators and boards of trustees everywhere view the announcement of the approved list of the college with much anticipation and, in some instances perhaps, with some consternation. It is interesting to note that the survey of 1918 revealed that while 619 hospitals with more than 100 beds were inspected,

Dr. Joseph C. Doane, director, Jewish Hospital, Philadelphia.

only eighty-nine were fully or conditionally approved—approximately 12 per cent of the whole number. The 1930 report shows that out of 1,430 hospitals surveyed, 93 per cent or 1,334 were fully or conditionally approved. It is also of interest to note that approximately sixty hospitals that were approved in 1929 failed of full approval. It would seem that the American College of Surgeons, for the good of the hospital and also from the standpoint of maintaining a high degree of respect for its approved hospitals, has come to the point where it is, and rightfully so, more critically examining those institutions upon which it is placing its stamp of approval.

Hospital Standardization Stressed

Dr. George W. Crile, director, Cleveland Clinic Foundation, Cleveland, spoke on the subject, "What the Hospital Standardization Movement Means to the Present Day Practice of Medicine." He stressed the aim of the whole movement as being an attempt to obtain better care for the hospital patient, remarking that "The ideal hospital will regard the patient as its pupil and will instruct him in matters that intimately concern his own good."

A splendid description of his conception of an ideal hospital was presented for the Rev. Alphonse M. Schwitalla, dean, St. Louis University School of Medicine, St. Louis. This paper bristled with a fine spirit of idealism and of the necessity for combining spiritual with physical things in hospital work.

Dr. Joseph C. Doane, director, Jewish Hospital, Philadelphia, spoke on the standardization of hospital surgical procedures. This paper will appear in an early issue of THE MODERN HOSPITAL.

Dr. J. Garland Sherrill, Louisville, Ky., had prepared a paper on "The Liaison Committee as a Means of Promoting Cooperation Between the Medical Staff and the Hospital Management," but he was unable to be present and his paper was presented by Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons.

An address was made at this session by Dr. C. Jeff Miller, New Orleans, president-elect, American College of Surgeons. Doctor Miller was outspoken in his denunciation of the practice in some hospitals of permitting surgeons to operate who have not served a thorough apprenticeship in the practice of their profession. He threw down the gauntlet to hospitals in this matter in these words: "It is the moral obligation of the hospital administration to prevent untrained and incapable surgeons from working within the institution. It will require a long process of education to convince American doctors that the protection of unwary patients from their eager surgical interference is not necessarily an infringement of their liberties. In the meantime, an effort must be made to create a sentiment against the performance of surgery except by those whose training and experience are of the best."

The discussion on this group of papers was opened by Dr. Charles Mayo, Mayo Clinic, Rochester, Minn., who in a rather humorous vein described the differences existing between the various economic classes of persons using the hospital. He expressed the belief that the hospital sometimes allows if not urges patients to purchase hospital care in private rooms when they are not financially able to do so. His opinion in this matter was almost immediately questioned by Robert Jolly, superintendent, Baptist Hospital, Houston, Tex., who stated that in his opinion hospitals never deliberately overburden a patient or his relatives with a debt that they find it difficult to carry.

Robert Jolly, superintendent, Baptist Hospital, Houston, Tex.

No hospital administrator can avoid applauding statements made by Doctor Mayo in regard to the absolute unfairness of caustic public criticism of interns, nurses and others, by the surgeon. He stated that "When such often un-

deserved, and always indiscreet castigation of these persons is uttered by a surgeon, it may be set down as almost axiomatic that that physician is working at about the intellectual level of which he is capable."

The Monday afternoon session of the college was opened by a paper by Dr. Joseph S. Baldwin, Brooklyn, N. Y., on "A Study of Acute Appendicitis From a Ten-Year Period at the Greenpoint Hospital, Brooklyn."

Several other valuable papers were presented at the closing session of the first day. Dr. John E. Jennings, surgeon-in-chief, Cumberland Hospital, Brooklyn, N. Y., pointed out that the free ward of most hospitals is a better place in which to receive medical treatment than the private rooms.

Doctor Jennings declared: "The luxury of the private rooms is an encroachment on the simplicity that should predominate in hospitals. It is not always easy to explain to a layman the essential virtue of a hospital when such a difference in prices of the various accommodations offered prevails. The private patient is willing to pay all he can. He demands to meet his obligation to the hospital. He may feel, however, that his charges are excessive and that, in some instances, he is being asked to pay for the support of ward facilities and for the educational activities of the institution." He concluded his address by urging that the faith and hope with which the private patient enters the hospital have been honestly earned and must be preserved.

Doctor Murphy's Memory Honored

The John B. Murphy Oration was delivered on Monday evening by Prof. George K. Turner of England. This oration, an annual event of the congress, is in memory of the great Chicago surgeon whose name it bears. Professor Turner's address concerned itself largely with the work and teachings of Doctor Murphy whom he termed the pioneer in abdominal surgery, and the first advocate of immediate treatment of acute appendicitis by operation, the inventor of the famous Murphy button and the originator of many other surgical achievements.

On Tuesday morning, the congress was startled by a statement included in the address of Dr. Frank L. Meleney, Columbia University, who stated that the catgut used in our hospitals is not always sterile. Hospital administrators will be surprised to learn that they have been purchasing in some instances this type of catgut. Yet, a majority must mentally comment on the rarity with which they have received complaints from surgeons who have used the sutures they have purchased, and on the extreme rarity of any serious infection, such as would certainly follow were the standard brands of catgut infected with the tetanus bacillus, in as great a percentage of cases as was claimed by the speaker.

At this session, basic considerations in maintaining an adequate x-ray service were discussed by Dr. Edward S. Blaine, radiologist, Wesley Memorial Hospital, Chicago, who spoke of the necessity for an entirely new shockproof type of x-ray apparatus for use in modern hospitals.

The value of autopsies was discussed by Dr. B. Henry Mason, superintendent, Waterbury Hospital, Waterbury, Conn. Lawrence C. Austin, superintendent, Mt. Sinai Hospital, Milwaukee, spoke of the ways by which an absorption of special charges could be brought about.

Ralph Hueston, Silver Cross Hospital, Joliet, Ill., read a paper on "A Comparison of Certain Factors Essential to the Success of a Hospital."

John E. Ransom, Johns Hopkins Hospital, Baltimore, described the teaching responsibility of the hospital.

Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons.

Splendid round table conferences were conducted during the week's session, and that of Tuesday afternoon was no exception. The relative functions of trustees, medical staffs and administrators were discussed at this time by Dr.

E. M. Bluestone, director, Montefiore Hospital, New York City; the responsibility of the medical staff to the administration of the hospital, by Dr. Joseph Tenopyr, Brooklyn, N. Y. In addition, Henry C. Wright, president, board of trustees, Bath City Hospital, Bath, Me., spoke on "The Rôle of the Hospital Board in the Selection, Appointment and Control of the Medical Staff." "The Relationship of the Department of Nursing to the Hospital" was discussed by Marian Rottmann, director of nursing, Department of Hospitals, New York City.

To add a touch of completeness to this program, social service was rightfully included. Elsa Butler Grove, Columbia University, described the aid social service might render to the administrator and the attending staff. This paper was discussed by Lena R. Waters, University of Pennsylvania Hospital, Philadelphia.

The Philadelphia Hospital Association was assigned the task of preparing the Tuesday evening program. The dietary service in the hospital was discussed by Martha Walker, dietitian, Jefferson Hospital. Lewis S. Grisby, general manager, Philadelphia Credit Bureau, described a central credit bureau for hospitals. Such a bureau represents a recent attempt in this city to bring about a cooperation in credit matters among the various hospitals in the city. It is endeavoring to prevent unethical and dishonest persons from repeatedly imposing upon institutions, by making it possible for each new institution to which such persons might apply to learn of unpaid bills they may have left in other hospitals. There is much to be said in favor of such a bureau, and hospitals the country over will watch this new development closely.

Increasing the Hospital's Income

John M. Smith, Hahnemann Hospital, in his discussion of "The Cost of Hospital Care," suggested various means of increasing the income of the hospital. Among these were to be found the enforcement of the taking of insurance for illness other than occupational and the creation of a state insurance fund by which the members of an approved hospital list might benefit when the participants in this plan become ill. In the discussion of this paper it was suggested that under certain conditions hospitals might urge any such persons in the community to take out endowment policies payable to the local institution upon maturity or the death of the principal.

Dr. John Snoke, Bryn Mawr Hospital, Bryn Mawr, Pa., in his paper on "The Patient's Impression of a Hospital," stressed the fact that it is not the efficiency of the surgical or medical treatment that the patient is most able to appreciate, but an atmosphere of kindness, good food, quiet and an apparently well thought out routine of the hospital work.

The paper of Sister M. DePaul, Misericordia Hospital, on "The Central Supply Room," was presented by Dr. John Ryan, Philadelphia.

On Wednesday, symposiums on "Clinical Records" were held, at which Paul H. Fesler, University Hospitals, Minneapolis, Mary H. Newton, medical statistician, Pittsburgh Homeopathic Hospital, Pittsburgh, Mary Merrill, student nurse, Williamsport Hospital, Williamsport, Pa., Dr. Irvin D. Metzger, president, Pennsylvania State Board of Medical Education and Licensure, and Dr. Joseph Turner, director, Mt. Sinai Hospital, New York City, spoke. This discussion was splendidly presented. Miss Merrill's contribution deserves commendation. This round table was led by Robert Jolly.

Prominent Speakers at Banquet

The Record Librarians' Association held its annual banquet on Wednesday evening and more than 200 persons attended. The speakers on this occasion were Robert Jolly, Dr. Joseph C. Doane, Dr. Malcolm T. MacEachern and Dr. C. W. Moots, Mentone, Calif.

Symposiums on cancer prevention and on traumatic surgery were held on Thursday afternoon and Friday morning at which splendid constructive suggestions were made as to the methods by which greater efforts might be made to control cancer. The chief speaker at the former meeting was Dr. James Ewing, New York Cancer Hospital. Doctor Ewing believes that there should be an attempt to establish in various places in the United States hospitals for the study of the cause and cure of cancer. These institutions should have three functions: service to the patient; an educational function, in fulfilling which they should become centers for the dissemination of knowledge to the general public; a research function, which is the most important and the most extensive of all since it covers all recognized fields and many branches of pure science. Cancer is no longer purely a surgical problem, because the ordinary surgeon, with the advent of radiology and laboratory diagnosis, is no longer competent to combat it alone. Dr. Henry Schmidt of the Edward Hines, Jr., Hospital, Hines, Ill., Dr. Ralph Greenough, Boston, and Dr. Rupert Fike, Atlanta, also took part in this discussion.

The final meeting of this session was the annual convocation of the American College of Surgeons, splendidly picturesque, and attended by over 600 members of the new class who were received into the fellowship of the college.

List of A. C. of S. Approved Hospitals Shows Gains

EACH year more and more hospitals are gaining a place on the approved list of the American College of Surgeons. For the year ending October 1, 1930, the number qualifying for approval was 2,063, ninety-four more than were listed last year. The number of hospitals surveyed this year, however, was increased by 309 over last year's list, 3,164 being covered by the survey. The total bed capacity of the hospitals surveyed is 449,356, of which 388,279 are in approved hospitals.

The following list of approved hospitals for the United States, Canada and other countries was made public at the Hospital Standardization Conference, American College of Surgeons, held in Philadelphia, October 13 to 17. Bed capacities as indicated include cribs and bassinets for the newborn.

"Conditionally Approved" hospitals are indicated by an asterisk. These hospitals have accepted the minimum requirements and are endeavoring to carry them out, but for lack of time or other acceptable reasons have not been able to do so in every detail. Some of these are new institutions that have not had sufficient time to complete the details of the requirements incident to their full approval.

Summary Statistics Showing Number and Percentage of Approved Hospitals

(1) Hospitals of 100 beds and over:
- Surveyed 1433
- Fully approved 1272
- Percentage fully approved 88.8
- Conditionally approved 62
- Percentage conditionally approved 4.3
- Not approved 99
- Percentage not approved 6.9
- Total fully and conditionally approved .. 1334
- Total percentage fully and conditionally approved 93.1

(2) Hospitals of 50 to 99 beds:
- Surveyed 1001
- Fully approved 482
- Percentage fully approved 48.1
- Conditionally approved 114
- Percentage conditionally approved 11.4
- Not approved 405
- Percentage not approved 40.5
- Total fully and conditionally approved .. 596
- Total percentage fully and conditionally approved 59.5

(3) Hospitals of 25 to 49 beds:
- Surveyed 730
- Fully approved 82
- Percentage fully approved 11.2
- Conditionally approved 51
- Percentage conditionally approved 7
- Not approved 597
- Percentage not approved 81.8
- Total fully and conditionally approved .. 133
- Total percentage fully and conditionally approved 18.2

(4) Government Hospitals:

(a) Army:
- Surveyed 5
- Fully approved 5
- Percentage fully approved 100

(b) Navy:
- Surveyed 13
- Fully approved 13
- Percentage fully approved 100

(c) Public Health Service:
- Surveyed 24
- Fully approved 24
- Percentage fully approved 100

(d) Veterans' Bureau:
- Surveyed 49
- Fully approved 49
- Percentage fully approved 100

(e) National Homes for Disabled and Volunteer Soldiers:
- Surveyed 10
- Fully approved 10
- Percentage fully approved 100

(5) Other Countries:

Twenty-five hospitals of other countries have been awarded full approval, and are included in the list of Approved Hospitals for 1928.

Summary

- Total surveyed 3164
- Total fully approved 1836
- Total percentage fully approved 58
- Total conditionally approved 227
- Total percentage conditionally approved 7.2
- Total not approved 1101
- Total percentage not approved 34.8
- Total fully and conditionally approved 2063
- Total percentage fully and conditionally approved:
  - Hospitals 100 beds and over 93.1
  - Hospitals 50 beds and over 79.3
  - Hospitals 25 beds and over 65.2

ALABAMA

Name of Hospital and Location	Capacity
ANNISTON	
Garner Memorial Hospital	66
BESSEMER	
Bessemer General Hospital	85
BIRMINGHAM	
Birmingham Baptist Hospital	140
Children's Hospital	50
Hillman Hospital	340
Norwood Hospital	210
St. Vincent's Hospital	125
South Highlands Infirmary	137
DOTHAN	
Frasier-Ellis Hospital	81
Moody Hospital	100
FAIRFIELD	
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company	310
GADSEN	
*Holy Name of Jesus Hospital	35
JASPER	
Walker County Hospital	50
MOBILE	
City Hospital	188
Mobile Infirmary	64
Providence Infirmary	100
United States Marine Hospital	90
MONTGOMERY	
*Montgomery Memorial Hospital	151
St. Margaret's Hospital	125
SELMA	
Alabama Baptist Hospital	73
Goldsby King Memorial Hospital	52
Vaughan Memorial Hospital	77
SYLACAUGA	
Drummond-Fraser Hospital	30
Sylacauga Infirmary	34
TUSKEGEE	
United States Veterans Hospital	747
TUSKEGEE INSTITUTE	
John A. Andrew Memorial Hospital	75

ARIZONA

BISBEE	
*Copper Queen Hospital	43
GLOBE	
Gila County Hospital	65
JEROME	
United Verde Copper Company Hospital	56
MIAMI	
Miami-Inspiration Hospital	44
PHOENIX	
Good Samaritan Hospital	117
St. Joseph's Hospital	165
PRESCOTT	
Mercy Hospital	43
TUCSON	
St. Mary's Hospital and Sanatorium	120
Southern Methodist Hospital and Sanatorium	125
United States Veterans Hospital	261
WHIPPLE BARRACKS	
United States Veterans Hospital	600

ARKANSAS

EL DORADO	
*Henry C. Rosamond Memorial Hospital	55
*Warner Brown Hospital	75
FAYETTTEVILLE	
Fayetteville City Hospital	61
FORT SMITH	
St. Edward's Mercy Hospital	115
*St. John's Hospital	55
Sparks Memorial Hospital	100
HELENA	
*Helena Hospital	40
HOT SPRINGS	
Leo N. Levi Memorial Hospital	70
St. Joseph's Hospital	158
JONESBORO	
St. Bernard's Hospital	108
LITTLE ROCK	
Arkansas Children's Hospital	76
Baptist State Hospital	300
Little Rock General Hospital	100
Missouri Pacific Hospital	150
St. Vincent's Infirmary	150
Trinity Hospital	50
NORTH LITTLE ROCK	
United States Veterans Hospital	750
TEXARKANA	
Michael Meagher Memorial Hospital	60
St. Louis Southwestern Hospital	150

CALIFORNIA

ALHAMBRA	
Alhambra Hospital	50
ARLINGTON	
Riverside County Hospital	210
BAKERSFIELD	
Mercy Hospital	120
BERKELEY	
Alta Bates Hospital	136
Ernest V. Cowell Memorial Hospital, University of California	100
BURBANK	
*Burbank Hospital	55
COMPTON	
Las Campanas Hospital	36
FORT BRAGG	
Redwood Coast Hospital	25
FRENCH CAMP	
San Joaquin General Hospital	400
FRESNO	
General Hospital of Fresno County	375
GLENDALE	
Glendale Sanitarium and Hospital	274
Physicians and Surgeons Hospital	88
LA JOLLA	
Scripps Memorial Hospital	50
LIVERMORE	
United States Veterans Hospital	318
LOMA LINDA	
Loma Linda Sanitarium and Hospital	206
LONG BEACH	
Long Beach Community Hospital	120
St. Mary's Long Beach Hospital	70
Seaside Hospital	300
LOS ANGELES	
Angelus Hospital	150
California Hospital	307
Cedars of Lebanon Hospital	250
Children's Hospital	230
French Hospital	102
Golden State Hospital	75
Hollywood Clara Barton Memorial Hospital	285
Hospital of the Good Samaritan	410
Methodist Hospital of Southern California	217
Orthopedic Hospital	85
Queen of the Angels Hospital	140
Roosevelt Hospital	84
St. Vincent's Hospital	248
Santa Fe Coast Lines Hospital	150
White Memorial Hospital	141
MARE ISLAND	
United States Naval Hospital	721
MONTEREY	
*Monterey Hospital	83
NATIONAL CITY	
Paradise Valley Sanitarium and Hospital	108
NATIONAL MILITARY HOME	
National Home, Pacific Branch	850
OAKLAND	
Children's Hospital of the East Bay	80
Fabiola Hospital	210
Highland Hospital of Alameda County	456
Peralta Hospital	148
Providence Hospital	242
Samuel Merritt Hospital	169
ORANGE	
Orange County General Hospital	271
OXNARD	
St. John's Hospital	58
PALO ALTO	
United States Veterans Hospital	1010
PASADENA	
Pasadena Hospital	224
POMONA	
Pomona Valley Community Hospital	100
RIVERSIDE	
Riverside Community Hospital	80
ROSS	
Ross General Hospital	68
SACRAMENTO	
Mater Misericordiae Hospital	150
Sacramento Hospital	404
Sutter Hospital	224
SAN BERNARDINO	
San Bernardino County Hospital	310
SAN DIEGO	
Mercy Hospital	325
San Diego County General Hospital	632
United States Naval Hospital	863
SAN FERNANDO	
United States Veterans Hospital	230
SAN FRANCISCO	
Franklin Hospital	247
French Hospital	220
Hospital for Children	314
Letterman General Hospital	1040
Mary's Help Hospital	160
Mount Zion Hospital	198
St. Francis Hospital	356
St. Joseph's Hospital	239
St. Luke's Hospital	229
St. Mary's Hospital	365
San Francisco Hospital	1204
Shriners' Hospital for Crippled Children	60
Southern Pacific General Hospital	300
Stanford University Hospitals	334
United States Marine Hospital	320
University of California Hospitals	287
SANITARIUM	
St. Helena Sanitarium and Hospital	146
SAN JOSE	
O'Connor Sanitarium	130
San Jose Hospital	121
Santa Clara County Hospital	490
SAN LEANDRO	
Fairmont Hospital of Alameda County	750
SAN MATEO	
Community Hospital of San Mateo County	106
Mills Memorial Hospital	150
SAN PEDRO	
San Pedro General Hospital	110
United States Naval Relief Ship	317
SANTA BARBARA	
St. Francis Hospital	100
Santa Barbara Cottage Hospital	176
Santa Barbara General Hospital	175
SANTA MONICA	
Santa Monica Hospital	106
STOCKTON	
St. Joseph's Home and Hospital	125
TORRANCE	
*Jared Sidney Torrance Memorial Hospital	59
VENTURA	
Big Sisters Hospital	46
VETERANS HOME	
Veterans Home of California	160
WESTWOOD	
*Westwood Hospital	100
WOODLAND	
Woodland Clinic Hospital	130

COLORADO

BOULDER	
Boulder-Colorado Sanitarium	120
Community Hospital	60
COLORADO SPRINGS	
Beth-El General Hospital	100
Glockner Sanatorium and Hospital	225
National Methodist Episcopal Sanatorium for Tuberculosis	70
St. Francis Hospital	125
DENVER	
Agnes Memorial Sanatorium	158
Beth Israel Hospital	67
Children's Hospital	175
Denver General Hospital	515
Fitzsimons General Hospital	1848
Mercy Hospital	190
National Jewish Hospital	350
Presbyterian Hospital of Colorado	175
St. Anthony's Hospital	200
St. Joseph's Hospital	249
St. Luke's Hospital	239
Sanatorium of the Jewish Consumptives' Relief Society	300
University of Colorado Hospitals Colorado General Hospital / Colorado Psychopathic Hospital	238
DURANGO	
Mercy Hospital	42
FORT LYON	
United States Veterans Hospital	500
GRAND JUNCTION	
St. Mary's Hospital	74
GREELEY	
Greeley Hospital	130
LA JUNTA	
Atchison, Topeka and Santa Fe Railroad Hospital	36
*Mennonite Hospital and Sanitarium	80
LONGMONT	
Longmont Hospital	40
PUEBLO	
Corwin Hospital	234
Parkview Hospital	80
St. Mary Hospital	162
SALIDA	
Denver and Rio Grande Western Hospital Association's Hospital	85
*Red Cross Hospital	42
STERLING	
*St. Benedict Hospital	36
TRINIDAD	
Mt. San Rafael Hospital	80

CONNECTICUT

BRIDGEPORT	
Bridgeport Hospital	415
St. Vincent's Hospital	235
BRISTOL	
Bristol Hospital	100
DANBURY	
Danbury Hospital	128
DERBY	
Griffin Hospital	100
GREENWICH	
Greenwich Hospital	125
HARTFORD	
Hartford Hospital	721
Mount Sinai Hospital	79
Municipal Hospital	145
St. Francis Hospital	589
MERIDEN	
Meriden Hospital	130
MIDDLETOWN	
*Middlesex Hospital	150
NEW BRITAIN	
New Britain General Hospital	236
NEW HAVEN	
Grace Hospital	286
Hospital of St. Raphael	250
New Haven Hospital	439

*The asterisk indicates conditional approval.

NEW LONDON
Home Memorial Hospital..... 60
Lawrence and Memorial Associated Hospitals 230
NORWALK
Norwalk General Hospital..... 159
NORWICH
William W. Backus Hospital..... 155
PUTNAM
*Day Kimball Hospital..... 56
SOUTH MANCHESTER
Manchester Memorial Hospital..... 64
STAMFORD
Stamford Hospital 267
TORRINGTON
Charlotte Hungerford Hospital..... 150
WATERBURY
St. Mary's Hospital..... 220
Waterbury Hospital 321
WILLIMANTIC
St. Joseph's Hospital 50
WINSTED
*Litchfield County Hospital..... 78

DELAWARE

FARNHURST
Delaware State Hospital..... 712
LEWES
Beebe Hospital of Lewes..... 60
WILMINGTON
Delaware Hospital 200
Homeopathic Hospital 108
St. Francis Hospital..... 100
Wilmington General Hospital..... 90

DISTRICT OF COLUMBIA

WASHINGTON
Central Dispensary and Emergency Hospital 280
Children's Hospital of the District of Columbia 182
Columbia Hospital for Women and Lying-In Asylum 203
Episcopal Eye, Ear, and Throat Hospital 98
Freedmen's Hospital 270
Gallinger Municipal Hospital..... 610
Garfield Memorial Hospital 311
Georgetown University Hospital..... 289
George Washington University Hospital 124
National Homeopathic Hospital..... 80
Providence Hospital 325
*Sibley Memorial Hospital 300
United States Naval Hospital..... 427
United States Veterans Hospital..... 205
Walter Reed General Hospital.....1500
Washington Sanitarium and Hospital... 180

FLORIDA

CLEARWATER
Morton F. Plant Endowed Hospital.... 35
DAYTONA BEACH
Halifax District Hospital..... 125
DE LAND
*De Land Memorial Hospital..... 32
FORT LAUDERDALE
*Lauderdale General Hospital..... 28
GAINESVILLE
Alachua County Hospital..... 55
JACKSONVILLE
Duval County Hospital..... 185
Riverside Hospital 41
St. Luke's Hospital 175
St. Vincent's Hospital 246
KEY WEST
United States Marine Hospital..... 75
LAKE CITY
United States Veterans Hospital..... 302
LAKELAND
Morrell Memorial Hospital..... 95
MELBOURNE
*Melbourne Hospital 27
MIAMI
*Dade County Hospital..... 102
James M. Jackson Memorial Hospital.. 325
Victoria Hospital 62
MIAMI BEACH
St. Francis Hospital 100
OCALA
Munroe Memorial Hospital..... 85
ORLANDO
*Orange General Hospital..... 170
Orlando-Florida Sanitarium and Hospital 125
PENSACOLA
Pensacola Hospital 125
United States Naval Hospital..... 190
ST. AUGUSTINE
East Coast Hospital..... 100
Flagler Hospital 85
ST. PETERSBURG
City Hospitals (Mound Park—Mercy).. 82
Faith Hospital 50
TALLAHASSEE
*Florida Agricultural and Mechanical College Hospital 25
TAMPA
Children's Hospital of Tampa..... 30
Tampa Municipal Hospital..... 225
WEST PALM BEACH
Good Samaritan Hospital..... 145

GEORGIA

ALBANY
*Phoebe Putney Memorial Hospital..... 50
ATHENS
Athens General Hospital..... 73
ATLANTA
Albert Steiner Clinic for Cancer and Allied Diseases 30
Davis-Fischer Sanatorium 165
Georgia Baptist Hospital 150
*Grady Memorial Hospital..... 530
Henrietta Egleston Hospital for Children 54
Piedmont Hospital 134
St. Joseph's Infirmary..... 125
United States Veterans Hospital..... 204
Wesley Memorial Hospital..... 165
AUGUSTA
United States Veterans Hospital..... 617
University Hospital 257
Wilhenford Hospital for Women and Children 54
COLUMBUS
City Hospital 125
CUTHBERT
Patterson Hospital 28
DECATUR
Scottish Rite Hospital for Crippled Children 64
GAINESVILLE
Downey Hospital 52
MACON
Macon Hospital 168
Middle Georgia Sanatorium..... 50
MILLEN
Millen Hospital 30
PLAINS
Wise Sanitarium 54
ROME
Harbin Hospital 75
SAVANNAH
Central of Georgia Railway Hospital... 62
United States Marine Hospital..... 146
THOMASVILLE
John D. Archbold Memorial Hospital... 115
WAYCROSS
Atlantic Coast Lines Hospital..... 75

IDAHO

BOISE
St. Alphonsus Hospital 127
St. Luke's Hospital 122
United States Veterans Hospital..... 235
IDAHO FALLS
Idaho Falls Latter Day Saints Hospital. 100
LEWISTON
St. Joseph's Hospital..... 100
NAMPA
Mercy Hospital 35
POCATELLO
Pocatello General Hospital 66
St. Anthony's Mercy Hospital..... 50
WALLACE
Providence Hospital 69

ILLINOIS

ALTON
St. Joseph's Hospital 75
AURORA
*Aurora Hospital 85
BERWYN
Berwyn Hospital 85
BLUE ISLAND
St. Francis Hospital..... 100
CAIRO
St. Mary's Hospital 100
CHICAGO
Albert Merritt Billings Hospital..... 166
Alexian Brothers Hospital..... 300
American Hospital 130
Augustana Hospital 405
Chicago Eye, Ear, Nose, and Throat Hospital 100
Chicago Lying-in Hospital and Dispensary 260
Chicago Memorial Hospital..... 103
Children's Memorial Hospital 275
Columbus Hospital 159
Cook County Hospital 3300
Edgewater Hospital 146
Englewood Hospital 137
Evangelical Deaconess Hospital..... 88
Evangelical Hospital of Chicago..... 260
Frances E. Willard National Temperance Hospital 185
Garfield Park Hospital 248
Grant Hospital 305
Henrotin Hospital 85
Holy Cross Hospital 124
Hospital of St. Anthony de Padua..... 265
Illinois Central Hospital..... 250
Illinois Eye and Ear Infirmary..... 237
Illinois Masonic Hospital..... 170
Jackson Park Hospital..... 225
John B. Murphy Hospital..... 140
Lake View Hospital..... 140
Lutheran Deaconess Home and Hospital 216
Lutheran Memorial Hospital..... 172
Mercy Hospital 405
Michael Reese Hospital..... 606
Misericordia Hospital and Home for Infants 110
Mother Cabrini Memorial Hospital..... 168
Mount Sinai Hospital 200
Municipal Contagious Disease Hospital. 428
Municipal Tuberculosis Sanitarium.....1250
Passavant Memorial Hospital..... 250
Post-Graduate Hospital 85
Presbyterian Hospital 439
*Provident Hospital 65
Ravenswood Hospital 193
Research and Educational Hospitals of the State of Illinois..... 175
Roseland Community Hospital..... 131
St. Anne's Hospital..... 310
St. Bernard's Hospital 200
St. Elizabeth's Hospital..... 385
St. Joseph's Hospital..... 220
St. Luke's Hospital..... 661
St. Mary of Nazareth Hospital..... 250
Shriners' Hospital for Crippled Children 60
South Shore Hospital..... 125
Swedish Covenant Hospital..... 200
United States Marine Hospital..... 150
University Hospital of Chicago..... 130
Washington Boulevard Hospital..... 110
Washington Park Community Hospital. 172
Wesley Memorial Hospital..... 275
West Side Hospital 161
Women and Children's Hospital..... 125
DANVILLE
Lake View Hospital 120
National Home, Danville Branch..... 263
St. Elizabeth's Hospital..... 134
DECATUR
Decatur and Macon County Hospital.... 169
Wabash Employees' Hospital..... 85
DE KALB
*De Kalb Public Hospital..... 52
DWIGHT
United States Veterans Hospital..... 225
EAST ST. LOUIS
Christian Welfare Hospital..... 62
St. Mary's Hospital..... 300
EVANSTON
Evanston Hospital 274
St. Francis Hospital..... 225
EVERGREEN PARK
*Little Company of Mary Hospital..... 174
FREEPORT
*Evangelical Deaconess Hospital..... 103
*Freeport Methodist Memorial Hospital. 50
*St. Francis Hospital..... 135
GALESBURG
Galesburg Cottage Hospital..... 65
GENEVA
*Community Hospital 105
GRANITE CITY
St. Elizabeth's Hospital..... 69
GREAT LAKES
United States Naval Hospital..... 800
HARVEY
Ingalls Memorial Hospital 120
HIGHLAND PARK
Highland Park Hospital..... 70
HINES
Edward Hines Junior Memorial Hospital1007
HINSDALE
*Hinsdale Sanitarium and Hospital..... 169
JACKSONVILLE
Our Savior's Hospital 75
Passavant Memorial Hospital..... 86
JOLIET
*St. Joseph's Hospital..... 190
*Silver Cross Hospital..... 112
KANKAKEE
St. Mary Hospital..... 100
KEWANEE
Kewanee Public Hospital..... 60
St. Francis Hospital 56
MELROSE PARK
Westlake Hospital 100
MOLINE
Lutheran Hospital 75
Moline Public Hospital..... 150
MURPHYSBORO
St. Andrew's Hospital..... 50
NORTH CHICAGO
United States Veterans Hospital..... 667
OAK PARK
Oak Park Hospital 175
West Suburban Hospital..... 427
OLNEY
Olney Sanitarium 75
PANA
Huber Memorial Hospital..... 50
PEORIA
*St. Francis Hospital..... 250
QUINCY
Blessing Hospital 150
St. Mary Hospital 216
ROCKFORD
Rockford Hospital 110
ROCK ISLAND
St. Anthony's Hospital 150
STERLING
Public Hospital of the City of Sterling 63
WAUKEGAN
St. Therese's Hospital..... 208
Victory Memorial Hospital..... 88

INDIANA

ANDERSON
St. John's Hospital 85

CROWN POINT
Lake County Tuberculosis Sanatorium. 128
EAST CHICAGO
St. Catherine's Hospital..... 300
EVANSVILLE
Protestant Deaconess Hospital..... 161
St. Mary's Hospital..... 125
United States Marine Hospital..... 54
Walker Hospital 105
FORT WAYNE
*Fort Wayne Lutheran Hospital..... 193
*Methodist Episcopal Hospital..... 138
St. Joseph's Hospital..... 343
FRANKFORT
Clinton County Hospital..... 50
GARY
Illinois Steel Company, Gary Hospital. 120
Methodist Hospital 100
St. Mary's Mercy Hospital..... 265
HAMMOND
St. Margaret's Hospital..... 250
INDIANAPOLIS
Indianapolis City Hospital..... 518
Indiana University Hospitals—
Robert W. Long Hospital
James Whitcomb Riley Hospital for Children
William H. Coleman Hospital for Women 420
Methodist Episcopal Hospital..... 662
St. Vincent's Hospital..... 285
JEFFERSONVILLE
*Clark County Memorial Hospital..... 35
LA FAYETTE
La Fayette Home Hospital..... 155
St. Elizabeth's Hospital 250
Wabash Valley Sanitarium and Hospital 50
LA PORTE
*Fairview Hospital 37
MARION
*Grant County Hospital..... 62
Marion National Sanatorium.....1104
MICHIGAN CITY
Clinic Hospital 60
St. Anthony's Hospital..... 100
MISHAWAKA
St. Joseph's Hospital 110
MUNCIE
Ball Memorial Hospital 160
NEW ALBANY
St. Edward's Hospital 100
RICHMOND
Reid Memorial Hospital..... 146
SOUTH BEND
Epworth Hospital 187
St. Joseph Hospital..... 147
SULLIVAN
Mary Sherman Memorial Hospital..... 60
TERRE HAUTE
St. Anthony's Hospital..... 177
Union Hospital 186

IOWA

AMES
Iowa State College Hospital..... 90
ANAMOSA
*Mercy Hospital 35
BURLINGTON
Burlington Hospital 125
Mercy Hospital 175
CARROLL
*St. Anthony Hospital..... 100
CEDAR RAPIDS
Mercy Hospital 175
St. Luke's Methodist Hospital..... 175
CENTERVILLE
*St. Joseph's Hospital..... 50
CLINTON
Jane Lamb Memorial Hospital..... 112
St. Joseph Mercy Hospital..... 84
COUNCIL BLUFFS
Jennie Edmundson Memorial Hospital.. 128
Mercy Hospital 147
DAVENPORT
Mercy Hospital 135
St. Luke's Hospital..... 127
DES MOINES
Iowa Lutheran Hospital and Iowa Lutheran Maternity Hospital..... 140
Iowa Methodist Hospital..... 275
Mercy Hospital 171
Polk County Public Hospitals—
Broadlawns Division 100
*General Division 109
DUBUQUE
Finley Hospital 112
FORT DODGE
St. Joseph's Mercy Hospital..... 119
FORT MADISON
Atchison, Topeka and Santa Fe Hospital 60
GRINNELL
Community Hospital 60
HAMPTON
Lutheran Hospital 54
IOWA CITY
Mercy Hospital 75
State University of Iowa, University Hospitals 734
KEOKUK
Graham Protestant Hospital..... 75
St. Joseph's Hospital..... 135
KNOXVILLE
United States Veterans Hospital..... 705
LE MARS
Sacred Heart Hospital 50
MASON CITY
Park Hospital 65
St. Joseph's Mercy Hospital..... 75
NEW HAMPTON
St. Joseph's Hospital..... 60
OTTUMWA
*Ottumwa Hospital 65
St. Joseph Hospital..... 75
Sunnyslope Sanatorium 50
SIOUX CITY
Lutheran Hospital 75
Methodist Hospital 138
St. Joseph's Mercy Hospital..... 200
St. Vincent's Hospital..... 125
WASHINGTON
Washington County Hospital 35
WATERLOO
Allen Memorial Hospital..... 58
St. Francis Hospital 90
WAVERLY
St. Joseph Mercy Hospital..... 56

KANSAS

CONCORDIA
*Concordia Hospital 39
St. Joseph's Hospital 85
EL DORADO
St. Luke's Hospital 46
ELLSWORTH
Ellsworth Hospital 47
FORT SCOTT
*Mercy Hospital 66
GREAT BEND
St. Rose Hospital 105
HALSTEAD
Halstead Hospital 140
HAYS
St. Anthony's Hospital 60
HUTCHINSON
Grace Hospital 107
St. Elizabeth's Mercy Hospital..... 68
KANSAS CITY
Bell Memorial Hospital 180
Bethany Methodist Hospital..... 148
St. Margaret's Hospital..... 300
LEAVENWORTH
St. John's Hospital..... 50
LIBERAL
*Epworth Hospital 51
MULVANE
Atchison, Topeka and Santa Fe Hospital 60
NATIONAL MILITARY HOME
National Home, Western Branch..... 392
NEWTON
Axtell Christian Hospital..... 53
Bethel Deaconess Hospital..... 57
PARSONS
*Missouri-Kansas-Texas Railroad Employees' Hospital 60
PITTSBURG
Mt. Carmel Hospital..... 75
SABETHA
St. Anthony Murdock Memorial Hospital 60
SALINA
St. John's Hospital..... 55
TOPEKA
Atchison, Topeka and Santa Fe Hospital 100
Christ's Hospital 106
Jane C. Stormont Hospital..... 90
St. Francis Hospital..... 87
WELLINGTON
Hatcher Hospital 35
WICHITA
St. Francis Hospital..... 300
Wesley Hospital 263
Wichita Hospital 119
WINFIELD
St. Mary's Hospital..... 50
William Newton Memorial Hospital.... 60

KENTUCKY

ASHLAND
*King's Daughters' Hospital 50
BEREA
*Berea College Hospital..... 127
BOWLING GREEN
*City Hospital 60
COVINGTON
St. Elizabeth's Hospital 375
William Booth Memorial Hospital..... 118
DAYTON
Speers Memorial Hospital..... 104
HOPKINSVILLE
*Jennie Stuart Memorial Hospital..... 30
JENKINS
Jenkins Hospital 65
LEXINGTON
Good Samaritan Hospital 170
St. Joseph's Hospital..... 182
Shriners' Hospital for Crippled Children —Mobile Unit 29
LOUISVILLE
Children's Free Hospital..... 72
Jewish Hospital 99
J. N. Norton Memorial Infirmary..... 110
Kentucky Baptist Hospital..... 150
Kosair Crippled Children Hospital..... 60
Louisville City Hospital..... 400
Methodist Episcopal Deaconess Hospital 75
St. Anthony's Hospital 135
St. Joseph's Infirmary 250
Sts. Mary and Elizabeth Hospital..... 145
United States Marine Hospital..... 71
LYNCH
Lynch Hospital of the United States Coal and Coke Company..... 54
MURRAY
William Mason Memorial Hospital..... 75
OUTWOOD
United States Veterans Hospital..... 375
PADUCAH
Illinois Central Hospital..... 91
Riverside Hospital 120
PARIS
W. W. Massie Memorial Hospital..... 50
PIKEVILLE
*Methodist Hospital 50

LOUISIANA

ALEXANDRIA
Baptist Hospital 66
United States Veterans Hospital..... 421
BATON ROUGE
Our Lady of the Lake Hospital..... 100
BOGALUSA
Elizabeth Sullivan Memorial Hospital.. 95
CARVILLE
United States Marine Hospital..... 372
HAYNESVILLE
*Haynesville Hospital 26
JACKSON
Parker Hospital of the East Louisiana Hospital for Insane 60
LAKE CHARLES
St. Patrick's Sanitarium..... 75
MONROE
St. Francis Sanitarium 140
NEW ORLEANS
Eye, Ear, Nose and Throat Hospital.... 66
*Flint-Goodridge Hospital 60
French Hospital 75
Hotel Dieu 266
Illinois Central Hospital..... 70
Mercy Hospital—Soniat Memorial..... 147
Southern Baptist Hospital..... 222
State of Louisiana Charity Hospital....1551
Touro Infirmary 414
United States Marine Hospital 250
SHREVEPORT
Highland Sanitarium 116
North Louisiana Sanitarium 100
Shreveport Charity Hospital 350
Shreveport Sanitarium and T. E. Schumpert Memorial Hospital 150
Shriners' Hospital for Crippled Children 60
Tri-State Sanitarium 125

MAINE

AUGUSTA
Augusta General Hospital..... 80
BANGOR
Eastern Maine General Hospital..... 150
BATH
Bath City Hospital 68
BELFAST
Waldo County General Hospital..... 33
FARMINGTON
Franklin County Memorial Hospital.... 60
LEWISTON
Central Maine General Hospital..... 125
St. Mary's General Hospital..... 150
NATIONAL SOLDIERS HOME
National Home, Eastern Branch..... 400
PORTLAND
Children's Hospital 100
Maine Eye and Ear Infirmary..... 125
Maine General Hospital..... 193
St. Barnabas Hospital..... 65
State Street Hospital..... 67
United States Marine Hospital..... 72
SANFORD
Henrietta D. Goodall Hospital..... 53

MARYLAND

BALTIMORE
Baltimore City Hospitals.....1868
Bon Secours Hospital..... 65
Children's Hospital 120
Church Home and Infirmary..... 175
Franklin Square Hospital..... 134
Hospital for the Women of Maryland.. 134
Howard A. Kelly Hospital..... 35
Johns Hopkins Hospital..... 750
Maryland General Hospital..... 240
Mercy Hospital 275
Provident Hospital and Free Dispensary 125
St. Agnes Hospital 208
St. Joseph's Hospital 276
Sinai Hospital 271
South Baltimore General Hospital..... 115
Union Memorial Hospital..... 268
United States Marine Hospital..... 167
University Hospital of the University of Maryland 250
Volunteers of America Hospital..... 40
West Baltimore General Hospital..... 165
CAMBRIDGE
Cambridge-Maryland Hospital 81

CUMBERLAND
Allegany Hospital of the Sisters of Charity 110
Memorial Hospital 185
EASTON
Emergency Hospital 63
FREDERICK
Frederick City Hospital 130
HAGERSTOWN
Washington County Hospital 90
HILLSDALE
James Lawrence Kernan Hospital and Industrial School of Maryland for Crippled Children 62
PERRY POINT
United States Veterans Hospital.....1015
SALISBURY
Peninsula General Hospital..... 104

MASSACHUSETTS

ADAMS
W. B. Plunkett Memorial Hospital.... 53
AMESBURY
Amesbury Hospital 36
ARLINGTON
Symmes Arlington Hospital..... 100
ATTLEBORO
Sturdy Memorial Hospital..... 125
AYER
*Community Memorial Hospital..... 29
BEDFORD
United States Veterans Hospital 492
BEVERLY
Beverly Hospital 146
BOSTON
Beth Israel Hospital..... 190
Boston City Hospital.....2000
Boston Dispensary Hospital for Children 36
Boston Lying-in Hospital 204
Carney Hospital 210
Children's and Infants' Hospital..... 302
Collis P. Huntington Memorial Hospital 25
Evangeline Booth Maternity Hospital and Home 60
Harley Private Hospital..... 83
House of the Good Samaritan..... 75
Long Island Hospital 575
Massachusetts Eye and Ear Infirmary.. 209
Massachusetts General Hospital..... 974
Massachusetts Memorial Hospitals..... 602
Massachusetts Women's Hospital..... 81
New England Baptist Hospital..... 150
New England Deaconess Association Hospitals 265
New England Hospital for Women and Children 240
Peter Bent Brigham Hospital..... 236
Robert Breck Brigham Hospital..... 115
St. Margaret's and St. Mary's Lying-in Hospitals 136
BRIGHTON
St. Elizabeth's Hospital..... 300
BROCKTON
Brockton Hospital 144
Goddard Hospital 71
BROOKLINE
Brooks Hospital 40
Free Hospital for Women..... 94
CAMBRIDGE
Cambridge City Hospital..... 114
Cambridge Hospital 300
CHELSEA
Chelsea Memorial Hospital 107
Soldiers' Home in Massachusetts..... 252
United States Marine Hospital..... 167
United States Naval Hospital..... 660
CLINTON
Clinton Hospital 85
CONCORD
Emerson Hospital in Concord..... 48
FALL RIVER
Fall River General Hospital..... 312
St. Anne's Hospital 110
Truesdale Hospital 120
Union Hospital in Fall River..... 175
FITCHBURG
Burbank Hospital 211
FRAMINGHAM
Framingham-Union Hospital 160
GARDNER
Henry Heywood Memorial Hospital..... 100
GLOUCESTER
Addison Gilbert Hospital..... 65
GREENFIELD
Franklin County Public Hospital..... 106
HAVERHILL
General Stephen Henry Gale Hospital.. 125
*Hale Hospital 60
HOLDEN
*Holden District Hospital..... 32
HOLYOKE
Holyoke Hospital 150
Providence Hospital 144
JAMAICA PLAIN
Emerson Hospital 48
Faulkner Hospital 100
LAWRENCE
Lawrence General Hospital 147
LEOMINSTER
Leominster Hospital 73
LOWELL
Lowell Corporation Hospital 100
Lowell General Hospital 130
St. John's Hospital 157
LYNN
Lynn Hospital 203
MALDEN
Malden Hospital 118
MEDFORD
Lawrence Memorial Hospital 105
MELROSE
Melrose Hospital 120
New England Sanitarium and Hospital. 165
MILFORD
*Milford Hospital 55
MONTAGUE CITY
Farren Memorial Hospital..... 92
NATICK
Leonard Morse Hospital 57
NEW BEDFORD
St. Luke's Hospital 330
NEWBURYPORT
Anna Jaques Hospital 60
NEWTON LOWER FALLS
Newton Hospital 240
NORFOLK
Pondville Hospital at Norfolk..... 115
NORTH ADAMS
North Adams Hospital..... 100
NORTHAMPTON
Cooley Dickinson Hospital..... 154
United States Veterans Hospital..... 555
NORWOOD
Norwood Hospital 100
PALMER
Wing Memorial Hospital 35
PEABODY
Josiah B. Thomas Hospital..... 50
PITTSFIELD
House of Mercy Hospital..... 222
St. Luke's Hospital 165
QUINCY
Quincy City Hospital 250
ROXBURY
Hart Private Hospital..... 85
Roxbury Hospital 75
RUTLAND
United States Veterans Hospital..... 420
SALEM
North Shore Babies' Hospital..... 50
Salem Hospital 137
SOMERVILLE
Somerville Hospital 80
SPRINGFIELD
Mercy Hospital 400
Shriners' Hospital for Crippled Children 60
Springfield Hospital 189
Wesson Maternity Hospital..... 112
Wesson Memorial Hospital..... 122
TAUNTON
Morton Hospital 75
VINEYARD HAVEN
United States Marine Hospital..... 25
WALTHAM
Waltham Hospital 215
WARE
Mary Lane Hospital..... 46
WESTFIELD
*Noble Hospital 108
WINCHESTER
Winchester Hospital 85
WOBURN
Charles Choate Memorial Hospital..... 61
WORCESTER
City Hospital 400
Fairlawn Hospital 61
Memorial Hospital 215
St. Vincent Hospital 250
Worcester Hahnemann Hospital..... 122

MICHIGAN

ALBION
James W. Sheldon Memorial Hospital. 50
ANN ARBOR
St. Joseph's Mercy Hospital..... 201
University Hospital 1285
BATTLE CREEK
Battle Creek Sanitarum.....1000
Leila Y. Post Montgomery Hospital.... 118
Nichols Memorial Hospital..... 100
BAY CITY
Mercy Hospital 180
CADILLAC
*Mercy Hospital 50
CAMP CUSTER
United States Veterans Hospital..... 602
DETROIT
Children's Hospital of Michigan..... 250
*Delray Industrial Hospital..... 95
*Detroit Eye, Ear, Nose and Throat Hospital 120
Evangelical Deaconess Hospital 135
Grace Hospital 397
Harper Hospital 487
Henry Ford Hospital..... 455
Herman Kiefer Hospital 1200
Jefferson Clinic and Diagnostic Hospital 55
Lincoln Hospital 62
Michigan Mutual Hospital 45
Providence Hospital 450
Receiving Hospital 750
St. Joseph's Mercy Hospital 184
St. Mary's Hospital 350
United States Marine Hospital 132
Woman's Hospital 173
FLINT
Hurley Hospital 450
*Women's Hospital 63
GOODRICH
Goodrich General Hospital 27
GRAND RAPIDS
Blodgett Memorial Hospital..... 150
Butterworth Hospital 270
St. Mary's Hospital 276
HANCOCK
St. Joseph's Hospital 60
HIGHLAND PARK
Highland Park General Hospital..... 145
IRONWOOD
*Grand View Hospital..... 50
ISHPEMING
Ishpeming Hospital 45
JACKSON
Mercy Hospital 74
W. A. Foote Memorial Hospital..... 129
KALAMAZOO
Bronson Methodist Hospital..... 125
New Borgess Hospital..... 350
LANSING
Edward W. Sparrow Hospital..... 115
St. Lawrence Hospital..... 128
MARQUETTE
*St. Luke's Hospital..... 58
MT. CLEMENS
St. Joseph Hospital..... 100
MUSKEGON
Hackley Hospital 115
Mercy Hospital 84
Muskegon County Sanatorium..... 52
NILES
*Pawating Hospital 46
OWOSSO
Memorial Hospital 100
PONTIAC
*Pontiac City Hospital..... 85
St. Joseph Mercy Hospital 150
SAGINAW
Saginaw General Hospital 143
St. Mary's Hospital 186
Woman's Hospital 62
SAULT STE. MARIE
Chippewa County War Memorial Hospital 61
WYANDOTTE
Wyandotte General Hospital..... 69

MINNESOTA

BRAINERD
St. Joseph's Hospital..... 70
CROOKSTON
Bethesda Hospital 45
St. Vincent's Hospital 50
DULUTH
St. Luke's Hospital..... 286
St. Mary's Hospital 290
EVELETH
More Hospital 38
FERGUS FALLS
St. Luke's Hospital..... 78
GRACEVILLE
*Western Minnesota Hospital..... 40
HIBBING
*Adams Hospital 33
LITTLE FALLS
St. Gabriel's Hospital..... 50
MANKATO
Immanuel Hospital 75
St. Joseph's Hospital 125
MINNEAPOLIS
Abbott Hospital 106
Asbury Hospital 168
Eitel Hospital 139
Fairview Hospital 200
Hill Crest Surgical Hospital..... 85
Lutheran Deaconess Home and Hospital 150
Maternity Hospital 122
Minneapolis General Hospital..... 670
Northwestern Hospital 200
St. Barnabas Hospital..... 166
St. Mary's Hospital..... 340
Shriners' Hospital for Crippled Children 60
Swedish Hospital 236
United States Veterans Hospital..... 557
University Hospital 300
NOPEMING
Nopeming Sanatorium 235
OAK TERRACE
Glen Lake Sanatorium..... 702

RED WING
*St. John's Hospital..... 90
ROCHESTER
Colonial Hospital 250
Kahler Hospital 250
St. Mary's Hospital..... 624
Worrell Hospital 185
ST. CLOUD
St. Cloud Hospital 211
United States Veterans Hospital..... 494
ST. PAUL
Ancker Hospital 1055
Bethesda Hospital 124
Charles T. Miller Hospital..... 216
Children's Hospital 75
Gillette State Hospital for Crippled Children 250
Midway Hospital 128
Mounds Park Sanitarium 138
Northern Pacific Beneficial Association Hospital 160
St. John's Hospital..... 90
St. Joseph's Hospital..... 252
St. Luke's Hospital 185
St. Paul Hospital..... 110
WADENA
*Wesley Hospital 50
WARREN
*Warren Hospital 52
WINONA
Winona General Hosiptal..... 124

MISSISSIPPI

AGRICULTURAL COLLEGE
J. Z. George Memorial Hospital..... 44
BILOXI
*Biloxi Hospital 58
BROOKHAVEN
King's Daughters' Hospital..... 59
CENTREVILLE
*Field Memorial Hospital..... 32
COLUMBIA
Columbia Clinic Hospital..... 38
CORINTH
McRae Hospital 75
GREENVILLE
King's Daughters' Hospital (White).... 114
GULFPORT
King's Daughhters' Hospital..... 100
United States Veterans Hospital..... 425
HATTIESBURG
South Mississippi Infirmary..... 75
HOUSTON
Houston Hospital 40
JACKSON
Jackson Infirmary 85
Mississippi Baptist Hospital 100
Mississippi State Charity Hosptal..... 65
LAUREL
*South Mississippi Charity Hospital..... 137
MERIDIAN
*Matty Hersee Hospital..... 110
Meridian Sanitarium 51
Rush's Infirmary 49
NATCHEZ
Natchez Charity Hospital..... 125
SANATORIUM
Mississippi State Tuberculosis Sanatorium 480
TUPELO
Tupelo Hospital 37
VICKSBURG
Vicksburg Hospital 72
Vicksburg Infirmary 52
Vicksburg Sanitarium and Crawford Street Hospital 100
WINONA
*Winona Infirmary 38

MISSOURI

BOONVILLE
St. Joseph's Hospital..... 75
CAPE GIRARDEAU
*St. Francis Hospital..... 75
*Southeast Missouri Hospital..... 71
COLUMBIA
Boone County General Hospital..... 53
University Hospitals, University of Missouri 100
EXCELSIOR SPRINGS
United States Veterans Hospital..... 301
HANNIBAL
*St. Elizabeth's Hospital 70
INDEPENDENCE
Independence Sanitarium 87
JEFFERSON BARRACKS
United States Veterans Hospital 403
JEFFERSON CITY
St. Mary's Hospital 60
JOPLIN
Freeman Hospital 102
St. John's Hospital 100
KANSAS CITY
Children's Mercy Hospital 154
Kansas City General Hospital..... 400
Kansas City General Hospital (Colored Division) 160
Research Hospital 225
St. Joseph Hospital 193
St. Luke's Hospital 240
St. Mary's Hospital 175
Trinity Lutheran Hospital 125
United States Veterans Hospital..... 200
Wheatley-Provident Hospital 65
MARYVILLE
St. Francis Hospital 85
ST. CHARLES
*St. Joseph's Hospital..... 60
ST. JOSEPH
Missouri Methodist Hospital..... 200
Noyes—Baptist Hospital 90
St. Joseph's Hospital 150
ST. LOUIS
Alexian Brothers Hospital..... 250
Barnard Free Skin and Cancer Hospital 40
Barnes Hospital 282
Bethesda Hospital 108
Christian Hospital 125
De Paul Hospital 285
Evangelical Deaconess Home and Hospital 200
Frisco Employees' Hospital 100
Jewish Hospital of St. Louis..... 663
Lutheran Hospital 170
Missouri Baptist Hospital..... 500
Missouri Pacific Hospital..... 300
St. Anthony's Hospital 240
St. John's Hospital 314
St. Louis Children's Hospital..... 203
St. Louis City Hospital..... 950
St. Louis Maternity Hospital..... 208
St. Luke's Hospital 216
St. Mary's Hospital 240
St. Mary's Infirmary 135
Shriners' Hospital for Crippled Children 106
United States Marine Hospital..... 100

MONTANA

ANACONDA
St. Ann's Hospital..... 75
BILLINGS
*Billings Deaconess Hospital..... 67
St. Vincent's Hospital 172
BOZEMAN
*Bozeman Deaconess Hospital..... 70
BUTTE
Murray Hospital 122
St. James Hospital..... 165
FORT HARRISON
United States Veterans Hospital..... 306
GLENDIVE
Northern Pacific Beneficial Association Hospital 71
GREAT FALLS
Columbus Hospital 340
Montana Deaconess Hospital 253
HAVRE
*Kennedy Deaconess Hospital..... 53
*Sacred Heart Hospital..... 53
HELENA
St. John's Hospital..... 65
St. Peter's Hospital..... 60
KALISPELL
Kalispell General Hospital..... 60
LEWISTOWN
*St. Joseph's Hospital..... 85
MILES CITY
Holy Rosary Hospital..... 100
MISSOULA
Northern Pacific Beneficial Association Hospital 72
St. Patrick's Hospital..... 120
Thornton Hospital 37

NEBRASKA

ALLIANCE
St. Joseph's Hospital 101
BEATRICE
Lutheran Hospital 97
COLUMBUS
St. Mary's Hospital..... 208
FALLS CITY
Falls City Hospital..... 40
GRAND ISLAND
St. Francis Hospital..... 150
LINCOLN
Bryan Memorial Hospital..... 112
Lincoln General Hospital..... 148
St. Elizabeth's Hospital..... 225
OMAHA
Bishop Clarkson Memorial Hospital.... 90
Creighton Memorial, St. Joseph's Hospital 420
Evangelical Covenant Hospital 85
Immanuel Hospital 120
Nebraska Methodist Episcopal Hospital. 225
St. Catherine's Hospital..... 165
University of Nebraska Hospital..... 255
Wise Memorial Hospital..... 73
SCOTTSBLUFF
West Nebraska Methodist Episcopal Hospital 75

NEVADA

EAST ELY
Steptoe Valley Hospital..... 48
ELKO
Elko General Hospital..... 50
RENO
St. Mary's Hospital..... 62

NEW HAMPSHIRE

BERLIN
Hospital St. Louis..... 60
CLAREMONT
Claremont General Hospital..... 70
CONCORD
Margaret Pillsbury General Hospital... 123
New Hampshire Memorial Hospital for Women and Children..... 85
DOVER
Wentworth Hospital 84
GRASMERE
Hillsborough County General Hospital. 125
HANOVER
Mary Hitchcock Memorial Hospital..... 140
KEENE
Elliot Community Hospital 86
LACONIA
Laconia Hospital 62
MANCHESTER
Balch Hospital for Children..... 30
Elliot Hospital 88
L'Hopital De Notre Dame De Lourdes. 85
Sacred Heart Hospital..... 85
NASHUA
Nashua Memorial Hospital..... 90
St. Joseph's Hospital 115
PORTSMOUTH
Portsmouth Hospital 80
United States Naval Hospital..... 166

NEW JERSEY

ATLANTIC CITY
Atlantic City Hospital..... 316
BAYONNE
Bayonne Hospital and Dispensary..... 200
BRIDGETON
Bridgeton Hospital 99
CAMDEN
Cooper Hospital 325
West Jersey Homeopathic Hospital.... 267
EAST ORANGE
Homeopathic Hospital of Essex County. 120
ELIZABETH
Alexian Brothers Hospital..... 200
Elizabeth General Hospital and Dispensary 226
St. Elizabeth Hospital..... 260
ENGLEWOOD
Englewood Hospital 195
FRANKLIN
*Franklin Hospital 37
HACKENSACK
Hackensack Hospital 225
HOBOKEN
St. Mary's Hospital 425
IRVINGTON
Irvington General Hospital..... 89
JERSEY CITY
Christ Hospital 119
Jersey City Hospital..... 600
St. Francis Hospital 250
LONG BRANCH
Monmouth Memorial Hospital 209
MONTCLAIR
Montclair Community Hospital..... 63
Mountainside Hospital 250
MORRISTOWN
All Souls Hospital 102
Moristown Memoial Hospital 174
MOUNT HOLLY
Burlington County Hospital 122
NEWARK
Babies' Hospital 35
Hospital and Home for Crippled Children 96
Hospital for Women and Children..... 75
Hospital of St. Barnabas..... 137
Newark Beth Israel Hospital..... 120
Newark City Hospital..... 700
Newark Eye and Ear Infirmary..... 62
Newark Memorial Hospital..... 165
Presbyterian Hospital 314
St. James General Hospital..... 125
St. Michael's Hospital..... 300
NEW BRUNSWICK
Middlesex General Hospital..... 110
*St. Peter's General Hospital..... 130
ORANGE
New Jersey Orthopedic Hospital and Dispensary 85
Orange Memorial Hospital..... 388
St. Mary's Hospital..... 126
PASSAIC
Passaic General Hospital..... 200
St. Mary's Hospital 225
PATERSON
Nathan and Miriam Barnert Memorial Hospital 105
Paterson General Hospital 303
St. Joseph's Hospital 445
PERTH AMBOY
Perth Amboy City Hospital..... 154
PLAINFIELD
Muhlenberg Hospital 272
PRINCETON
Princeton Hospital 70
RAHWAY
*Memorial Hospital 120
RIDGEWOOD
Bergen County Hospital 400

SECAUCUS
Hudson County Hospital 210
SOMERVILLE
Somerset Hospital 86
SPRING LAKE
Ann May Memorial Homeopathic Hospital 100
SUMMIT
Overlook Hospital 125
TEANECK
Holy Name Hospital 180
TRENTON
Mercer Hospital 210
St. Francis Hospital 207
Trenton Municipal Colony Hospital.... 426
William McKinley Memorial Hospital... 146
VINELAND
Newcomb Hospital 100
WEEHAWKEN
North Hudson Hospital 189

NEW MEXICO

ALBUQUERQUE
Atchison, Topeka, and Santa Fe Hospital 70
St. Joseph Sanatorium and Hospital.... 250
CLOVIS
*Atchison, Topeka, and Santa Fe Hospital 32
FORT BAYARD
United States Veterans Hospital..... 450
FORT STANTON
United States Marine Hospital..... 250
GALLUP
St. Mary's Hospital 100
RATON
*New Mexico Miners' Hospital..... 35
ROSWELL
St. Mary's Hospital..... 60
SANTA FE
St. Vincent Sanatorium and Hospital.. 80

NEW YORK

ALBANY
Albany Hospital 540
Anthony N. Brady Maternity Home.... 120
*Child's Hospital 50
Memorial Hospital 140
St. Peter's Hospital 129
AMSTERDAM
*Amsterdam City Hospital 86
*St. Mary's Hospital 120
AUBURN
Auburn City Hospital 155
BATAVIA
*Batavia Hospital 58
St. Jerome's Hospital 72
BAY SHORE
Southside Hospital 98
BINGHAMTON
Binghamton City Hospital..... 414
BRONXVILLE
Lawrence Hospital 105
BROOKLYN
*Bay Ridge Sanitarium 100
*Bethany Deaconess Hospital 100
Beth Moses Hospital 212
*Brooklyn Eye and Ear Hospital..... 168
Brooklyn Hospital 294
Brownsville and East New York Hospital 244
Bushwick Hospital 118
Caledonian Hospital of the City of New York 141
Carson C. Peck Memorial Hospital.... 110
Coney Island Hospital 300
Cumberland Hospital 327
Greenpoint Hospital 264
Hospital of the Holy Family..... 118
House of St. Giles the Cripple..... 98
Jewish Hospital of Brooklyn 655
Kings County Hospital 1809
Kingston Avenue Hospital 580
Long Island College Hospital 480
Lutheran Hospital 110
Methodist Episcopal Hospital 415
Norwegian Lutheran Deaconesses' Home and Hospital 201
Prospect Heights Hospital and Brooklyn Maternity 190
St. Catherine's Hospital 296
St. John's Hospital 234
St. Mary's Hospital of the City of Brooklyn 307
St. Peter's Hospital 250
*Swedish Hospital 80
United Israel-Zion Hospital 415
Wyckoff Heights Hospital of Brooklyn.. 175
BUFFALO
Buffalo City Hospital 863
Buffalo Columbus Hospital 70
Buffalo General Hospital 391
*Buffalo Hospital of the Sisters of Charity 215
Children's Hospital of Buffalo 250
Deaconess Hospital 227
Emergency Hospital of the Sisters of Charity 100
*Memorial Hospital of Buffalo..... 65
Mercy Hospital 161
Millard Filmore Hospital 306
St. Mary's Maternity Hospital 150
United States Marine Hospital 85
CAMBRIDGE
Mary McClellan Hospital 112
CANANDAIGUA
Frederick Ferris Thompson Hospital... 112
CASTLE POINT
United States Veterans Hospital..... 400
CLIFTON SPRINGS
Clifton Springs Sanitarium and Clinic.. 469
COHOES
Cohoes Hospital 52
CORNING
*Corning Hospital 110
CORTLAND
Cortland County Hospital 135
DOBBS FERRY
Dobbs Ferry Hospital 50
ELLIS ISLAND
United States Marine Hospital 540
ELMIRA
Arnot-Ogden Memorial Hospital..... 203
St. Joseph's Hospital 172
ENDICOTT
Ideal Hospital of Endicott 131
FAR ROCKAWAY
St. Joseph's Hospital 100
FLUSHING
Flushing Hospital and Dispensary 243
GENEVA
Geneva General Hospital 58
GLEN COVE
North Country Community Hospital.... 120
GLENS FALLS
Glens Falls Hospital 95
GLOVERSVILLE
Nathan Littauer Hospital 120
HORNELL
*Bethesda Hospital 57
St. James Mercy Hospital 90
HUDSON
Hudson City Hospital 97
ITHACA
*Ithaca Memorial Hospital 126
JAMAICA
Mary Immaculate Hospital 310
Queensboro Hospital 64
JAMESTOWN
Jamestown General Hospital 115
Woman's Christian Association Hospital 136
JOHNSON CITY
Charles S. Wilson Memorial Hospital.. 170
KINGSTON
Benedictine Hospital 100
Kingston Hospital 135
LACKAWANNA
Our Lady of Victory Hospital..... 129
LONG ISLAND CITY
St. John's Long Island City Hospital.. 272
MALONE
Alice Hyde Memorial Hospital 50
MIDDLETOWN
*Elizabeth A. Horton Hospital..... 108
MINEOLA
Nassau Hospital 205
MT. KISCO
Northern Westchester Hospital 68
MOUNT VERNON
Mount Vernon Hospital 150
NEWBURGH
St. Luke's Hospital of Newburgh, N. Y. 134
NEW ROCHELLE
New Rochelle Hospital 147
NEW YORK CITY
Babies' Hospital of the City of New York 204
Beekman Street Hospital 100
Bellevue Hospital 2069
Beth David Hospital 128
Beth Israel Hospital Medical Center.... 501
*Booth Memorial Hospital 49
*Broad Street Hospital 128
Bronx Hospital 110
Columbus Hospital 104
Columbus Hospital Extension 100
Community Hospital 110
Fifth Avenue Hospital 301
Fordham Hospital 340
French Benevolent Society Hospital.... 190
Gouverneur Hospital 210
Harlem Hospital 341
Herman Knapp Memorial Eye Hospital. 50
Hospital for Joint Diseases 351
Hospital for the Ruptured and Crippled 306
Hospital of the Rockefeller Institute for Medical Research 60
Jewish Memorial Hospital 117
Knickerbocker Hospital 237
Lebanon Hospital 192
Lenox Hill Hospital 333
Lincoln Hospital 331
Lutheran Hospital of Manhattan..... 121
Lying-in Hospital of the City of New York 281
Manhattan Eye, Ear, and Throat Hospital 214
Manhattan Maternity and Dispensary.. 99
Memorial Hospital for the Treatment of Cancer and Allied Diseases 104
Metropolitan Hospital 1435
*Midtown Hospital 61
Misericordia Hospital 327
Montefiore Hospital 845
Morrisania Hospital 416
Mt. Sinai Hospital 676
Neurological Institute of New York.... 209
New York City Hospital 1060
New York Eye and Ear Infirmary..... 175
New York Foundling Hospital..... 305
New York Homeopathic Medical College and Flower Hospital 227
New York Hospital 298
New York Infirmary for Women and Children 138
New York Nursery and Child's Hospital 256
*New York Ophthalmic Hospital..... 57
New York Orthopedic Dispensary and Hospital 260
New York Polyclinic Medical School and Hospital 293
New York Post-Graduate Medical School and Hospital 485
New York Skin and Cancer Hospital... 94
Presbyterian Hospital in the City of New York 571
Reconstruction Hospital 57
Riverside Hospital 336
Roosevelt Hospital 377
St. Elizabeth's Hospital 142
St. Francis' Hospital 450
St. Luke's Hospital 417
St. Mary's Hospital for Children..... 134
St. Vincent's Hospital of the City of New York 370
Sloane Hospital for Women 320
Sydenham Hospital 200
United States Naval Hospital 847
United States Veterans Hospital 950
*West Side Hospital and Dispensary ... 33
Willard Parker Hospital 400
Woman's Hospital in the State of New York 289
NIAGARA FALLS
Mt. St. Mary's Hospital 145
Niagara Falls Memorial Hospital..... 191
NORTHPORT
United States Veterans Hospital..... 944
OLEAN
Olean General Hospital 100
ONEIDA
Broad Street Hospital 66
ONEONTA
Aurelia Osborn Fox Memorial Hospital 57
OSSINING-ON-HUDSON
Ossining Hospital 58
Sing Sing Prison Hospital 50
OSWEGO
*Oswego Hospital 89
OTISVILLE
Municipal Sanatorium 384
PENN YAN
Solidiers and Sailors Memorial Hospital. 48
PLATTSBURG
Champlain Valley Hospital 107
Physicians' Hospital of Plattsburg..... 133
PORT CHESTER
United Hospital 110
POUGHKEEPSIE
St. Francis Hospital 112
Vassar Brothers Hospital 204
RICHMOND HILL
Jamaica Hospital 159
ROCHESTER
Genesee Hospital 235
Highland Hospital 258
*Monroe County Hospital 250
Park Avenue Hospital 103
Rochester General Hospital 306
Rochester Municipal Hospital 237
St. Mary's Hospital 190
Strong Memorial Hospital 282
ROCKAWAY BEACH
*Rockaway Beach Hospital 100
ROME
Oneida County Hospital 180
Rome and Murphy Hospital 70
SARATOGA SPRINGS
Saratoga Hospital 107
SCHENECTADY
Ellis Hospital 285
SOUTHAMPTON
*Southampton Hospital 115
STAPLETON
United States Marine Hospital..... 288
SUNMOUNT
United States Veterans Hospital..... 375
SYRACUSE
Crouse-Irving Hospital 234
General Hospital of Syracuse 110
Onondaga General Hospital 76
St. Joseph Hospital 231
Syracuse Memorial Hospital 250
University Hospital of the Good Shepherd 269

TARRYTOWN
Tarrytown Hospital 60
TICONDEROGA
Moses-Ludington Hospital 50
TOMPKINSVILLE
Staten Island Hospital 275
TROY
Leonard Hospital 62
Samaritan Hospital 175
Troy Hospital 274
UTICA
Faxton Hospital 144
Masonic Soldiers and Sailors Memorial Hospital 200
St. Elizabeth's Hospital 125
*St. Luke's Home and Hospital..... 152
Utica General Hospital 120
Utica Memorial Hospital 75
VALHALLA
Grasslands Hospital 584
WARSAW
Wyoming County Community Hospital. 70
WATERTOWN
House of the Good Samaritan 118
Mercy Hospital 118
WEST HAVERSTRAW
New York State Reconstruction Home.. 300
WEST NEW BRIGHTON
St. Vincent's Hospital 115
WHITE PLAINS
White Plains Hospital 118
YONKERS
St. John's Riverside Hospital 101
*St. Joseph's Hospital 120
*Yonkers General Hospital 188

NORTH CAROLINA

ASHEVILLE
*Asheville Mission Hospital 127
*Aston Park Hospital 74
BILTMORE
Biltmore Hospital 63
CHARLOTTE
Charlotte Eye, Ear and Throat Hospital 25
Mercy Hospital 77
New Charlotte Sanatorium 110
*Presbyterian Hospital 110
*St. Peter's Hospital 78
DURHAM
Watts Hospital 210
FAYETTEVILLE
Highsmith Hospital 100
*Pittman Hospital 85
GASTONIA
*City Hospital 54
North Carolina Orthopedic Hospital.... 141
GOLDSBORO
*Goldsboro Hospital 53
GREENSBORO
L. Richardson Memorial Hospital..... 60
St. Leo's Hospital 97
Sternberger Children's Hospital 40
GREENVILLE
*Pitt Community Hospital 36
HICKORY
Richard Baker Hospital 35
HIGH POINT
High Point Hospital 75
KINSTON
Memorial General Hospital 35
*Parrott Memorial Hospital 55
LEAKSVILLE
*Leaksville Hospital 31
LENOIR
*Caldwell Hospital 25
LINCOLNTON
Lincoln Hospital 35
LUMBERTON
Baker Sanatorium 65
Thompson Memorial Hospital 35
MT. AIRY
Martin Memorial Hospital 50
NORTH WILKESBORO
Wilkes Hospital 25
OTEEN
United States Veterans Hospital 612
PINEHURST
Moore County Hospital 37
RALEIGH
Rex Hospital 126
St. Agnes Hospital 100
ROCKY MOUNT
Atlantic Coast Line Railroad Hospital 50
Park View Hospital 100
RUTHERFORDTON
Rutherford Hospital 64
SHELBY
Shelby Hospital 50
STATESVILLE
Davis Hospital 54
Long's Sanatorium 56
TARBORO
Edgecombe General Hospital 48
WASHINGTON
Washington Hospital 35
WILMINGTON
Bulluck Hospital 35
James Walker Memorial Hospital 150
WILSON
Moore-Herring Hospital 35
WINSTON-SALEM
City Memorial Hospital 235
Lawrence Hospital 50
North Carolina Baptist Hospital 108
WRIGHTSVILLE SOUND
Babies' Hospital 40

NORTH DAKOTA

BISMARCK
Bismarck Hospital and Deaconess Home 140
St. Alexius Hospital 150
DEVILS LAKE
Mercy Hospital 58
DICKINSON
St. Joseph's Hospital 80
FARGO
St. John's Hospital 200
St. Luke's Hospital 150
United States Veterans Hospital..... 57
GRAND FORKS
Grand Forks Deaconess Hospital..... 110
St. Michael's Hospital 77
MINOT
St. Joseph's Hospital 100
Trinity Hospital 220

OHIO

AKRON
Children's Hospital 110
City Hospital of Akron 285
Peoples Hospital 192
St. Thomas Hospital 185
ALLIANCE
Alliance City Hospital 100
ASHTABULA
*Ashtabula General Hospital 93
BELLAIRE
City Hospital 50
CANTON
Aultman Hospital 160
Mercy Hospital 125
CHILLICOTHE
United States Veterans Hospital 614
CINCINNATI
Bethesda Hospital 375
Children's Hospital 150
Christ Hospital 165
Cincinnati General Hospital 850
Deaconess Hospital 175
Good Samaritan Hospital 550
Jewish Hospital 288
St. Mary Hospital 203
CLEVELAND
Babies' and Children's Hospital 147
Charity Hospital 275
City Hospital 1075
Cleveland Clinic Hospital 184
*Evangelical Deaconess Hospital 144
Fairview Park Hospital 96
Glenville Hospital 100
Grace Hospital 40
Huron Road Hospital 120
Lakeside Hospital 262
Lutheran Hospital 129
Maternity Hospital 300
Mt. Sinai Hospital of Cleveland 272
Polyclinic Hospital 130
St. Alexis Hospital 200
St. Ann's Maternity Hospital 110
St. John's Hospital of Cleveland..... 212
St. Luke's Hospital 318
United States Marine Hospital..... 250
Woman's Hospital 125
COLUMBUS
Children's Hospital 75
Grant Hospital 303
Hawkes Hospital of Mt. Carmel 249
Mercy Hospital 75
St. Ann's Infant Asylum and Maternity Hospital 50
St. Francis Hospital 150
Starling-Loving University Hospital.... 267
White Cross Hospital 265
DAYTON
Miami Valley Hospital 396
National Military Home, Central Branch 1165
St. Elizabeth Hospital 408
DOVER
Union Hospital 85
EAST AKRON
Springfield Lake Sanatorium 238
ELYRIA
Elyria Memorial Hospital and Gates Hospital for Crippled Children..... 154
FINDLAY
Home and Hospital of the City of Findlay 75
FREMONT
Memorial Hospital of Sandusky County 50
GALLIPOLIS
Holzer Hospital 57
HAMILTON
*Mercy Hospital 250
LAKEWOOD
Lakewood Public Hospital 72
LIMA
Lima City Hospital 91
St. Rita's Hospital 116
LORAIN
St. Joseph's Hospital 120
MANSFIELD
Mansfield General Hospital 75
MARTINS FERRY
Martins Ferry Hospital 75
MASSILLON
Massillon City Hospital 105
MIDDLETOWN
Middletown Hospital 100
NEWARK
Newark Hospital 50
OBERLIN
Allen Hospital 36
PIQUA
Memorial Hospital 59
PORTSMOUTH
Mercy Hospital 75
*Portsmouth General Hospital 75
Schirrman Hospital 50
SALEM
Salem City Hospital 57
SANDUSKY
Good Samaritan Hospital 74
Providence Hospital 60
STEUBENVILLE
*Ohio Valley Hospital 125
TOLEDO
Flower Hospital 150
Lucas County Hospital 397
Mercy Hospital 119
Robinwood Hospital 103
St. Vincent's Hospital 387
Toledo Hospital 121
Women's and Children's Hospital..... 180
WARREN
*St. Joseph's Riverside Hospital..... 50
Warren City Hospital 110
YOUNGSTOWN
St. Elizabeth's Hospital 300
Youngstown Hospital 450
ZANESVILLE
Bethesda Hospital 175
Good Samaritan Hospital 145

OKLAHOMA

ARDMORE
*Hardy Sanitarium 40
BARTLESVILLE
*Washington County Memorial Hospital. 66
EL RENO
*El Reno Sanitarium 66
McALESTER
Albert Pike Hospital 55
MUSKOGEE
*Oklahoma Baptist Hospital 70
United States Veterans Hospital 400
OKLAHOMA CITY
*Oklahoma City General Hospital..... 100
St. Anthony's Hospital 180
University Hospitals:
University Hospital
Crippled Children's Hospital..... 425
Wesley Hospital 103
PAWHUSKA
*Pawhuska Municipal Hospital 35
PONCA CITY
Ponca City Hospital 75
TULSA
Morningside Hospital 225
St. John's Hospital 309

OREGON

ASTORIA
*Columbia Hospital 92
St. Mary's Hospital 90
CORVALLIS
*Corvallis General Hospital 47
EUGENE
Pacific Christian Hospital 92
MARSHFIELD
*Wesley Hospital 75
MEDFORD
Sacred Heart Hospital 70
OREGON CITY
Oregon City Hospital 57
PENDLETON
*St. Anthony's Hospital 84
PORTLAND
Dr. Robert C. Coffey Clinic and Hospital 81
Doernbecher Memorial Hospital for Children 75
Emanuel Hospital 283
Good Samaritan Hospital 326
Multnomah Hospital 275
Portland Sanitarium 135
St. Vincent's Hospital 402
Shriners' Hospital for Crippled Children 50
United States Veterans Hospital..... 313
SALEM
Salem General Hospital 71

PENNSYLVANIA

ABINGTON
Abington Memorial Hospital 206
ALLENTOWN
Allentown Hospital 325
Sacred Heart Hospital 188
ALTOONA
Altoona Hospital 180
Mercy Hospital 134
ASHLAND
Ashland State Hospital 236
ASPINWALL
United States Veterans Hospital..... 226
BEAVER FALLS
Providence Hospital 65
BELLEVUE
Suburban General Hospital 115
BETHLEHEM
St. Luke's Hospital 206
BLOOMSBURG
Bloomsburg Hospital 125
BLOSSBURG
*Blossburg State Hospital 77
BRADDOCK
Braddock General Hospital 125
BRADFORD
Bradford Hospital 100
BROWNSVILLE
Brownsville General Hospital 100
BRYN MAWR
Bryn Mawr Hospital 255
CANONSBURG
Canonsburg General Hospital 54
CARLISLE
Carlisle Hospital 50
CHAMBERSBURG
Chambersburg Hospital 90
CHESTER
Chester Hospital 266
J. Lewis Crozer Homeopathic Hospital.. 100
CLEARFIELD
Clearfield Hospital 130
COALDALE
*Coaldale State Hospital 82
COATESVILLE
Coatesville Hospital 125
COLUMBIA
*Columbia Hospital 67
CONNELLSVILLE
Connellsville State Hospital 106
CORRY
*Corry Hospital 48
DANVILLE
George F. Geisinger Memorial Hospital 180
DREXEL HILL
Delaware County Hospital 70
DU BOIS
Du Bois Hospital 50
Maple Avenue Hospital 70
EASTON
Easton Hospital 171
ERIE
Hamot Hospital 210
St. Vincent's Hospital 213
FRANKLIN
*Franklin Hospital 57
GETTYSBURG
Annie M. Warner Hospital 60
GREENSBURG
Westmoreland Hospital 160
HANOVER
Hanover General Hospital 65
HARRISBURG
Harrisburg Hospital 239
Harrisburg Polyclinic Hospital 182
HAZLETON
Hazleton State Hospital 135
HOMESTEAD
Homestead Hospital 150
HUNTINGDON
J. C. Blair Memorial Hospital 81
INDIANA
Indiana Hospital 85
JOHNSTOWN
Cambria Hospital 65
Conemaugh Valley Memorial Hospital.. 290
Lee Homeopathic Hospital 60
Mercy Hospital of Johnstown 100
KANE
Community Hospital 65
*Kane Summit Hospital 87
KINGSTON
Nesbitt Memorial Hospital 126
LANCASTER
Lancaster General Hospital 250
St. Joseph's Hospital 200
LEAGUE ISLAND
United States Naval Hospital 729
LEBANON
Good Samaritan Hospital 100
LEWISTOWN
Lewistown Hospital 50
LOCK HAVEN
Lock Haven Hospital 90
MAYVIEW
Pittsburgh City Home and Hospitals....3200
McKEESPORT
McKeesport Hospital 263
McKEES ROCKS
Ohio Valley General Hospital 60
MEADVILLE
*Spencer Hospital 83
NANTICOKE
Nanticoke State Hospital 95
NEW BRIGHTON
Beaver Valley General Hospital 80
NEW CASTLE
Jameson Memorial Hospital 153
New Castle Hospital 125
NEW EAGLE
Memorial Hospital of Monongahela 73
NEW KENSINGTON
Citizens General Hospital 100
NORRISTOWN
Montgomery Hospital 125
OIL CITY
Oil City Hospital 140
PALMERTON
Palmerton Hospital 65
PHILADELPHIA
American Hospital for Diseases of the Stomach 39
Chestnut Hill Hospital 112
Children's Hospital of Philadelphia.... 103
Children's Hospital of the Mary J. Drexel Home 50
Frankford Hospital 142
*Frederick Douglass Memorial Hospital.. 75
Germantown Dispensary and Hospital.. 360
Graduate Hospital of the University of Pennsylvania 497
Greatheart Maternity Hospital 52
Hahnemann Medical College Hospital.. 700
Hospital of the Protestant Episcopal Church in Philadelphia 450
Hospital of the University of Pennsylvania 562
Hospital of the Woman's Medical College of Pennsylvania 134
Jefferson Hospital 676
Jewish Hospital 330
Joseph Price Memorial Hospital 100
Kensington Hospital for Women 101
Lankenau Hospital 257
Mercy Hospital 100
Methodist Episcopal Hospital 305
Misericordia Hospital 306
Mt. Sinai Hospital 316
Northeastern Hospital of Philadelphia. 100
Northwestern General Hospital 64
Pennsylvania Hospital 298
Philadelphia General Hospital 2000
Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases 140
Presbyterian Hospital in Philadelphia.. 333
St. Agnes Hospital 346
St. Christopher's Hospital for Children. 75
St. Joseph's Hospital 270
St. Luke's and Children's Homeopathic Hospitals 300
St. Mary's Hospital 210
St. Vincent's Hospital for Women and Children 151
Shriners' Hospital for Crippled Children 120
Stetson Hospital 77
Temple University Hospital 370
United States Veterans Hospital 416
*West Philadelphia Homeopathic Hospital 85
Wills Hospital 126
Woman's Hospital of Philadelphia.... 170
Woman's Southern Homeopathic Hospital 110
Women's Homeopathic Hospital of Philadelphia 200
PHILIPSBURG
Philipsburg State Hospital 108
PITTSBURGH
Allegheny General Hospital 405
Children's Hospital of Pittsburgh..... 200
Elizabeth Steel Magee Hospital 392
Eye and Ear Hospital 55
Homeopathic Medical and Surgical Hospital and Dispensary 312
Mercy Hospital 670
Montefiore Hospital Association of Western Pennsylvania 225
Passavant Hospital 154
Pittsburgh Hospital 200
Presbyterian Hospital 197
Roselia Foundling Asylum and Maternity Hospital 215
St. Francis Hospital 650
St. John's General Hospital of Allegheny City 202
St. Joseph's Hospital and Dispensary.. 140
St. Margaret Memorial Hospital 152
South Side Hospital 225
Tuberculosis League Hospital 150
United States Marine Hospital 82
Western Pennsylvania Hospital 651
PITTSTON
Pittston Hospital 125
POTTSTOWN
Pottstown Hospital 100
POTTSVILLE
Pottsville Hospital 140
READING
Homeopathic Medical and Surgical Hospital 115
Reading Hospital 285
St. Joseph's Hospital 205
RIDLEY PARK
Taylor Hospital 129
ROARING SPRING
*Nason Hospital 58
ROCHESTER
Rochester General Hospital 118
ROXBOROUGH
Memorial Hospital 150
SAYRE
Robert Packer Hospital 275
SCRANTON
Hahnemann Hospital 125
Mercy Hospital 110
Moses Taylor Hospital 113
St. Joseph's Children's and Maternity Hospital 188
Scranton State Hospital 194
SELLERSVILLE
Grand View Hospital..... 65
SEWICKLEY
Valley Hospital 130
SHAMOKIN
Shamokin State Hospital 84
SHARON
Christian H. Buhl Hospital 125
TARENTUM
Allegheny Valley Hospital 100
UNIONTOWN
Uniontown Hospital 225
WARREN
Warren General Hospital 100
WASHINGTON
Washington Hospital 152
WEST CHESTER
Chester County Hospital 136
Homeopathic Hospital of Chester County 77
WILKES-BARRE
Mercy Hospital 220
Wilkes-Barre General Hospital 472
WILKINSBURG
Columbia Hospital 204
WILLIAMSPORT
Williamsport Hospital 275
WINDBER
Windber Hospital 102
YORK
West Side Sanitarium 45
York Hospital 123

RHODE ISLAND

NEWPORT
Newport Hospital 171
United States Naval Hospital 295
PAWTUCKET
Memorial Hospital 100
PROVIDENCE
Homeopathic Hospital of Rhode Island.. 200
Miriam Hospital 77
Providence City Hospital 250
Providence Lying-in Hospital 310
Rhode Island Hospital 600
St. Joseph's Hospital 205
WESTERLY
Westerly Hospital 73
WOONSOCKET
*Woonsocket Hospital 136

SOUTH CAROLINA

ANDERSON
Anderson County Hospital 84
BENNETTSVILLE
Marlboro County General Hospital 43
CHARLESTON
Baker Sanatorium 55
Roper Hospital 325
St. Francis Xavier Infirmary 62
United States Naval Hospital 75
COLUMBIA
Columbia Hospital of Richland County.. 125
South Carolina Baptist Hospital 115
FLORENCE
McLeod Infirmary 135
GREENVILLE
Emma Moss Booth Memorial Hospital.. 61
Greenville City Hospital 141
Shriners' Hospital for Crippled Children 60
ORANGEBURG
Orangeburg Hospital 57
PARRIS ISLAND
United States Naval Hospital 161
SPARTANBURG
Mary Black Clinic and Private Hospital 40
Spartanburg General Hospital 273
SUMTER
Tuomey Hospital 45
TAYLORS
Chick Springs Hotel—Sanitarium..... 80

SOUTH DAKOTA

ABERDEEN
Lincoln Hospital 80
St. Luke's Hospital 100

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Abstract from Editorial, "The Radiologists' Liability Insurance," in American Journal of Roentgenology and Radium Therapy, Vol. XXIV, No. 1, July, 1930.

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Chamberlain Sanitarium and Hospital. 85
DEADWOOD
*St. Joseph's Hospital 56
HOT SPRINGS
Battle Mountain Sanitarium 544
*Lutheran Sanatorium and Hospital.... 50
*Our Lady of Lourdes Hospital..... 75
HURON
Sprague Hospital 65
LEAD
Homestake Hospital 25
MADISON
New Madison Hospital 81
MITCHELL
Methodist State Hospital 115
St. Joseph's Hospital 85
PIERRE
St. Mary's Hospital 65
RAPID CITY
Methodist Deaconess Hospital 70
SIOUX FALLS
McKennan Hospital 124
Moe Hospital 60
WATERTOWN
Bartron Hospital 60
Luther Hospital 65
WEBSTER
Peabody Hospital 80
YANKTON
Sacred Heart Hospital 125

TENNESSEE

CHATTANOOGA
Baroness Erlanger Hospital 228
Children's Hospital 86
Newell and Newell Sanitarium 85
Pine Breeze Sanitarium 210
DYERSBURG
Baird-Brewer General Hospital 50
GREENEVILLE
Greeneville Sanatorium and Hospital.. 60
JACKSON
Crook Sanatorium and Clinic 81
JOHNSON CITY
Appalachian Hospital 58
KNOXVILLE
Knoxville General Hospital 261
Riverside-Fort Sanders Hospital 170
MADISON
Madison Rural Sanitarium 90
MEMPHIS
Baptist Memorial Hospital 400
Gartly-Ramsay Hospital 50
Hospital for Crippled Adults 30
Memphis Eye, Ear, Nose, and Throat Hospital 65
Memphis General Hospital 400
Methodist Hospital 190
St. Joseph's Hospital 240
United States Marine Hospital 65
United States Veterans Hospital..... 360
Willis C. Campbell Clinic 50
MURFREESBORO
Rutherford Hospital 50
NASHVILLE
Barr Infirmary 25
George W. Hubbard Hospital 140
Millie E. Hale Hospital 60
Nashville General Hospital 170
Protestant Hospital 110
St. Thomas Hospital 225
Vanderbilt University Hospital 224
NATIONAL SANITARIUM
National Home, Mountain Branch.....1701

TEXAS

AMARILLO
Northwest Texas Hospital 85
St. Anthony's Sanitarium 112
BEAUMONT
Hotel Dieu 175
CORPUS CHRISTI
*Fred Roberts Memorial Hospital 72
Spohn Sanitarium 56
CUERO
*Burns Hospital 38
DALLAS
Baylor Hospital 377
Bradford Memorial Hospital for Babies 60
Dallas Medical and Surgical Clinic.... 28
Dallas Methodist Hospital 100
Parkland Hospital 285
Rushing Clinic and Sanitarium 25
St. Paul's Hospital 300
Texas Scottish Rite Hospital for Crippled Children 60
EL PASO
El Paso Masonic Hospital 64
Hotel Dieu 122
William Beaumont General Hospital.... 506
FORT SAM HOUSTON
Station Hospital 750
FORT WORTH
All Saints Hospital 85
Baptist Hospital of Fort Worth 60
*City and County Hospital 110
Harris-Clinic Hospital 100
Methodist Hospital of Fort Worth..... 116
St. Joseph's Infirmary 224
W. I. Cook Memorial Hospital 53
GALVESTON
John Sealy Hospital 374
St. Mary's Infirmary 150
HILLSBORO
*Boyd Sanitarium 25
HOUSTON
Baptist Hospital 200
Hermann Hospital 194
Jefferson Davis Hospital 160
Methodist Hospital 105
St. Joseph's Infirmary 250
Southern Pacific Hospital 120
KERRVILLE
*Kerrville Clinic and Secor Hospital..... 27
LAREDO
Mercy Hospital 90
LEGION
United States Veterans Hospital 433
LUBBOCK
*Lubbock Sanitarium 111
*West Texas Hospital 66
MARSHALL
Texas and Pacific Railway Employees' Hospital 105
McKINNEY
McKinney City Hospital 40
ORANGE
*Frances Ann Lutcher Hospital 65
PALESTINE
International and Great Northern Railway Employees' Hospital 75
PARIS
*Lamar County Hospital 59
*St. Joseph's Infirmary 50
Sanitarium of Paris 55
SAN ANGELO
*St. John's Sanitarium 32
SAN ANTONIO
Medical and Surgical Hospital 125
Robert B. Green Memorial Hospital 235
Santa Rosa Hospital 342
SHERMAN
*St. Vincent's Sanitarium 75
*Wilson N. Jones Hospital 74
SLATON
*Mercy Hospital 56
TEMPLE
Gulf, Colorado and Santa Fe Hospital. 150
King's Daughters' Hospital 115
Scott and White Hospital 200
TEXARKANA
Texarkana Hospital 50
WACO
Central Texas Baptist Sanitarium 100
Colgin Hospital and Clinic 43
Providence Sanitarium 150
WAXAHACHIE
*Waxahachie Sanitarium 31
WICHITA FALLS
Wichita Falls Clinic-Hospital 80
Wichita General Hospital 100

UTAH

LOGAN
William Budge Memorial Hospital 60
OGDEN
Thomas D. Dee Memorial Hospital..... 190
SALT LAKE CITY
Dr. W. H. Groves Latter Day Saints Hospital 466
Holy Cross Hospital 233
St. Mark's Hospital 163
Salt Lake General Hospital..... 199

VERMONT

BARRE
*Barre City Hospital 50
BRATTLEBORO
Brattleboro Memorial Hospital 60
BURLINGTON
Bishop de Goesbriand Hospital 122
Mary Fletcher Hospital 145
MONTPELIER
Heaton Hospital 77
RUTLAND
Rutland Hospital 120
ST. ALBANS
St. Albans Hospital 50
ST. JOHNSBURY
Brightlook Hospital 65
WINOOSKI
Fanny Allen Hospital 83

VIRGINIA

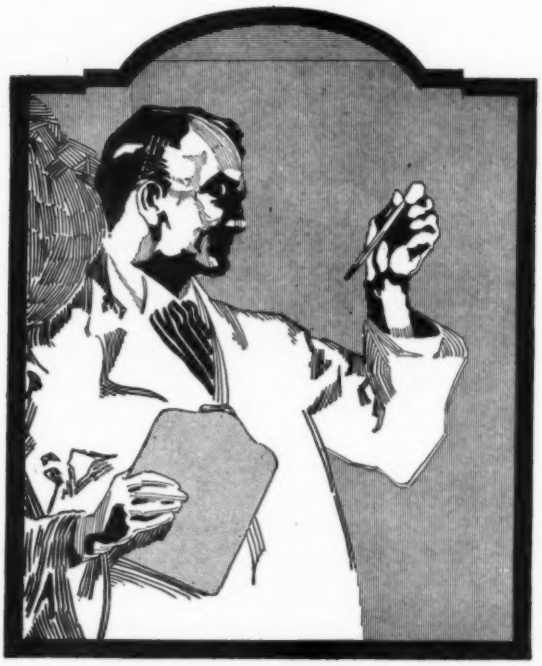
ABINGDON
George Ben Johnston Memorial Hospital 62
CLIFTON FORGE
Chesapeake and Ohio Hospital 110
HAMPTON
*Dixie Hospital and Hampton Training School for Nurses 71
LYNCHBURG
Lynchburg Hospital 85
Marshall Lodge Memorial Hospital..... 33
Virginia Baptist Hospital 102
NATIONAL SOLDIERS HOME
National Home, Southern Branch..... 810
NEWPORT NEWS
Elizabeth Buxton Hospital 95
Riverside Hospital 72
NORFOLK
Hospital of St. Vincent de Paul..... 250
Memorial Hospital of Norfolk 58
Norfolk Protestant Hospital 160
Sarah Leigh Hospital 80
United States Marine Hospital 217
United States Naval Hospital..... 800
PETERSBURG
Medical Center-Central State Hospital. 108
Petersburg Hospital 75
PORTSMOUTH
*King's Daughters' Hospital 80
*Parrish Memorial Hospital 60
RICHMOND
Crippled Children's Hospital 60
Grace Hospital 50
Johnston-Willis Hospital 90
Medical College of Virginia, the Memorial, the Dooley and St. Philip Hospitals 436
Retreat for the Sick 100
St. Elizabeth's Hospital 60
St. Luke's Hospital 81
Sheltering Arms Hospital 75
Stuart Circle Hospital 107
Tucker Sanatorium 50
ROANOKE
*Burrell Memorial Hospital 44
Gill Memorial Eye, Ear, and Throat Hospital 25
Jefferson Hospital 100
Lewis-Gale Hospital 66
Roanoke Hospital 110
Shenandoah Hospital 60
STAUNTON
King's Daughters' Hospital 65
SUFFOLK
Lakeview Hospital 65
UNIVERSITY
University of Virginia Hospital 250

WASHINGTON

ABERDEEN
Grays Harbor Hospital 76
St. Joseph's Hospital 76
AMERICAN LAKE
United States Veterans Hospital..... 495
BELLINGHAM
St. Joseph's Hospital 100
St. Luke's Hospital 100
BREMERTON
United States Naval Hospital 224
CHEHALIS
*St. Helen's Hospital 41
COLFAX
*St. Ignatius Hospital 70
COLLEGE PLACE
Walla Walla Sanitarium and Hospital. 54
ELLENSBURG
*Ellensburg General Hospital 50
EVERETT
General Hospital of Everett 100
Providence Hospital 125
LONGVIEW
Longview Memorial Hospital 96
OLYMPIA
St. Peter's Hospital 100
PASCO
*Our Lady of Lourdes Hospital 60
PORT ANGELES
*Port Angeles Hospital and Sanitarium. 88
PORT TOWNSEND
United States Marine Hospital..... 100
SEATTLE
Children's Orthopedic Hospital 132
Columbus Hospital 211
Providence Hospital 412
St. Luke's Hospital 60
Seattle City Hospital 117
Seattle General Hospital 135
Swedish Hospital 255
Virginia Mason Hospital 180
SHELTON
*Shelton General Hospital 36
SPOKANE
Deaconess Hospital 205
Sacred Heart Hospital 330
St. Luke's Hospital 203
Shriners' Hospital for Crippled Children —Mobile Unit 25
TACOMA
Northern Pacific Beneficial Association Hospital 116
Pierce County Hospital 172
St. Joseph's Hospital 350
Tacoma General Hospital 200
VANCOUVER
*Clark General Hospital 62
St. Joseph's Hospital 125
WALLA WALLA
St. Mary's Hospital 100
United States Veterans Hospital..... 355
Walla Walla Valley General Hospital. 59
WENATCHEE
*Central Washington Deaconess Hospital 63
*St. Anthony's Hospital 77
YAKIMA
St. Elizabeth's Hospital 183

WEST VIRGINIA

BECKLEY
Beckley Hospital 85
BLUEFIELD
Bluefield Sanitarium 110
St. Luke's Hospital 83



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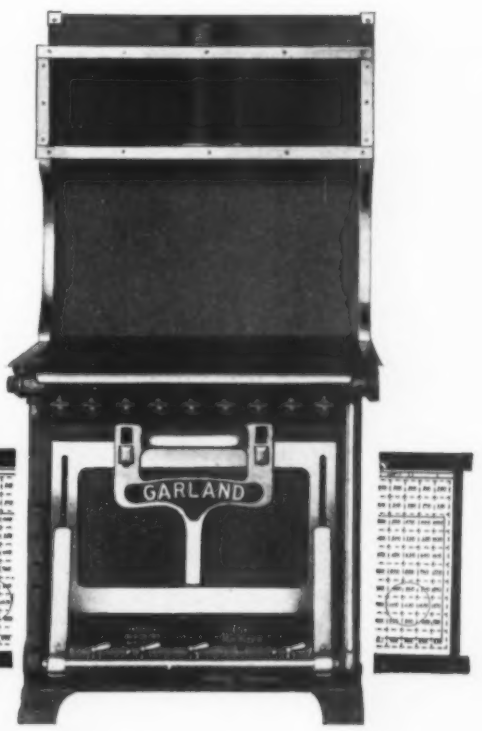

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CHARLESTON
Kanawha Valley Hospital 75
McMillan Hospital 100
Mountain State Hospital 110
New Charleston General Hospital..... 168
CLARKSBURG
St. Mary's Hospital 175
ELKINS
Davis Memorial Hospital 62
Elkins City Hospital 50
FAIRMONT
Cook Hospital 110
Fairmont Hospital No. 3 80
GLENDALE
Reynolds Memorial Hospital 87
HUNTINGTON
Chesapeake and Ohio Hospital 136
Guthrie Hospital 67
Kessler-Hatfield Hospital 150
St. Mary's Hospital 87
LOGAN
Hatfield-Lawson Hospital 106
MARTINSBURG
City Hospital 75
McKENDREE
McKendree Hospital No. 2..... 60
MONTGOMERY
Coal Valley Hospital 65
MORGANTOWN
Monongalia County Hospital 80
PRINCETON
Mercer Memorial Hospital 45
RICHWOOD
*McClung Hospital 40
RONCEVERTE
*Greenbrier Valley Hospital 48
WELCH
Welch Hospital No. 1..... 115
WHEELING
Ohio Valley General Hospital..... 275
*Wheeling Hospital 185

WISCONSIN

APPLETON
St. Elizabeth Hospital 250
ASHLAND
*Ashland General Hospital 75
St. Joseph's Hospital 150
BELOIT
Beloit Municipal Hospital 100
DODGEVILLE
St. Joseph's Hospital 72
EAU CLAIRE
Luther Hospital 115
FOND DU LAC
St. Agnes Hospital 244
GREEN BAY
Bellin Memorial Hospital 120
St. Mary's Hospital 125
JANESVILLE
Mercy Hospital 150
KENOSHA
Kenosha Hospital 180
St. Catharine's Hospital 63
LA CROSSE
Grandview Hospital 116
La Crosse Lutheran Hospital 148
Methodist Hospital of La Crosse 40
St. Francis Hospital 300
MADISON
Madison General Hospital 180
Methodist Hospital 120
St. Mary's Hospital 192
State of Wisconsin General Hospital.... 475
MANITOWOC
Holy Family Hospital 150
MARSHFIELD
St. Joseph's Hospital 170
MILWAUKEE
Columbia Hospital 109
Evangelical Deaconess Hospital 180
Milwaukee Children's Hospital..... 155
Milwaukee Hospital 249
Milwaukee Maternity and General Hospital 119
Misericordia Hospital 209
Mt. Sinai Hospital 168
Sacred Heart Sanitarium 390
St. Joseph's Hospital 409
St. Luke's Hospital 105
St. Mary's Hospital 266
NATIONAL HOME
National Home, Northwestern Branch.. 941
NEENAH
Theda Clark Memorial Hospital..... 72
OSHKOSH
Mercy—St. Mary's Hospital 180
RACINE
St. Mary's Hospital 106
STEVENS POINT
St. Michael's Hospital 139
SUPERIOR
St. Mary's Hospital 127
WAUKESHA
United States Veterans Hospital..... 250
WAUSAU
St. Mary's Hospital..... 135
Wausau Memorial Hospital..... 110
WAUWATOSA
Milwaukee County Hospital 1000
Muirdale Sanatorium 350

WYOMING

CASPER
Memorial Hospital of Natrona County.. 115
CHEYENNE
Memorial Hospital of Laramie County.. 132
MIDWEST
*Midwest Hospital 25
SHERIDAN
Sheridan County Memorial Hospital ... 72
United States Veterans Hospital 438
WHEATLAND
Wheatland General Hospital 69

CANAL ZONE

ANCON
Gorgas Hospital 874

HAWAII

HILO
Hilo Memorial Hospital 92
HONOLULU
*Japanese Hospital 120
*Kauikeolani Children's Hospital 61
Leahi Home 450
Queen's Hospital 284
St. Francis Hospital 55
Shriners' Hospital for Crippled Children 34

PORTO RICO

SAN JUAN
Presbyterian Hospital 70

ARMY

DENVER, COLORADO
Fitzsimons General Hospital 1848
EL PASO, TEXAS
William Beaumont Hospital 403
FORT SAM HOUSTON, TEXAS
Station Hospital 800
SAN FRANCISCO, CALIFORNIA
Letterman General Hospital 750
WASHINGTON, DISTRICT OF COLUMBIA
Walter Reed General Hospital 1500

NAVY

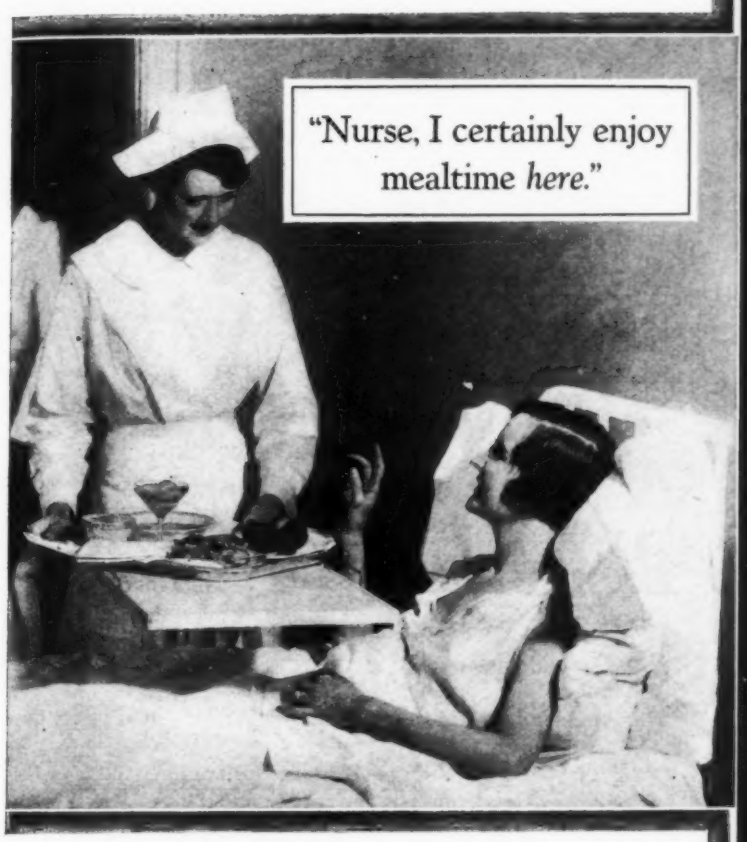
CHARLESTON, SOUTH CAROLINA
United States Naval Hospital 75
CHELSEA, MASSACHUSETTS
United States Naval Hospital 628
GREAT LAKES, ILLINOIS
United States Naval Hospital 800
LEAGUE ISLAND, PHILADELPHIA, PENNSYLVANIA
United States Naval Hospital 500
MARE ISLAND, CALIFORNIA
United States Naval Hospital 721
NEWPORT, RHODE ISLAND
United States Naval Hospital 295
NEW YORK, NEW YORK
United States Naval Hospital 847
NORFOLK, VIRGINIA
United States Naval Hospital 816
PARRIS ISLAND, SOUTH CAROLINA
United States Naval Hospital 161
PENSACOLA, FLORIDA
United States Naval Hospital 190
SAN DIEGO, CALIFORNIA
United States Naval Hospital 1000
SAN PEDRO, CALIFORNIA
United States Naval Relief Ship 567
WASHINGTON, DISTRICT OF COLUMBIA
United States Naval Hospital 427

PUBLIC HEALTH

BALTIMORE, MARYLAND
United States Marine Hospital 167
BUFFALO, NEW YORK
United States Marine Hospital 85
CARVILLE, LOUISIANA
United States Marine Hospital 372
CHELSEA, MASSACHUSETTS
United States Marine Hospital 167
CHICAGO, ILLINOIS
United States Marine Hospital 150
CLEVELAND, OHIO
United States Marine Hospital 250
DETROIT, MICHIGAN
United States Marine Hospital 132
ELLIS ISLAND, NEW YORK
United States Marine Hospital 540
EVANSVILLE, INDIANA
United States Marine Hospital 54
FORT STANTON, NEW MEXICO
United States Marine Hospital 250
KEY WEST, FLORIDA
United States Marine Hospital 75
LOUISVILLE, KENTUCKY
United States Marine Hospital 71
MEMPHIS, TENNESSEE
United States Marine Hospital 65
MOBILE, ALABAMA
United States Marine Hospital 90
NEW ORLEANS, LOUISIANA
United States Marine Hospital..... 250
NORFOLK, VIRGINIA
United States Marine Hospital 217
PITTSBURGH, PENNSYLVANIA
United States Marine Hospital..... 82
PORTLAND, MAINE
United States Marine Hospital 72
PORT TOWNSEND, WASHINGTON
United States Marine Hospital 160
ST. LOUIS, MISSOURI
United States Marine Hospital 100
SAN FRANCISCO, CALIFORNIA
United States Marine Hospital 320
SAVANNAH, GEORGIA
United States Marine Hospital 146
STAPLETON, NEW YORK
United States Marine Hospital 288
VINEYARD HAVEN, MASSACHUSETTS
United States Marine Hospital 25

VETERANS' BUREAU

ALEXANDRIA, LOUISIANA
United States Veterans Hospital 421
AMERICAN LAKE, WASHINGTON
United States Veterans Hospital 495
ASPINWALL, PENNSYLVANIA
United States Veterans Hospital 226
ATLANTA, GEORGIA
United States Veterans Hospital 204
AUGUSTA, GEORGIA
United States Veterans Hospital 617
BEDFORD, MASSACHUSETTS
United States Veterans Hospital 492
BOISE, IDAHO
United States Veterans Hospital 235
CAMP CUSTER, MICHIGAN
United States Veterans Hospital 602
CASTLE POINT, NEW YORK
United States Veterans Hospital 400
CHILLICOTHE, OHIO
United States Veterans Hospital 614
DWIGHT, ILLINOIS
United States Veterans Hospital 225
EXCELSIOR SPRINGS, MISSOURI
United States Veterans Hospital 301
FARGO, NORTH DAKOTA
United States Veterans Hospital 57
FORT BAYARD, NEW MEXICO
United States Veterans Hospital 450
FORT HARRISON, MONTANA
United States Veterans Hospital 306
FORT LYON, COLORADO
United States Veterans Hospital 500
GULFPORT, MISSISSIPPI
United States Veterans Hospital 425
HINES, ILLINOIS
Edward Hines Junior Hospital 1007
JEFFERSON BARRACKS, MISSOURI
United States Veterans Hospital 403
KANSAS CITY, MISSOURI
United States Veterans Hospital 200
KNOXVILLE, IOWA
United States Veterans Hospital 705
LAKE CITY, FLORIDA
United States Veterans Hospital 302
LEGION, TEXAS
United States Veterans Hospital 433
LIVERMORE, CALIFORNIA
United States Veterans Hospital 318
MEMPHIS, TENNESSEE
United States Veterans Hospital 360
MINNEAPOLIS, MINNESOTA—FORT SNELLING
United States Veterans Hospital 557
MUSKOGEE, OKLAHOMA
United States Veterans Hospital 400
NEW YORK, NEW YORK
United States Veterans Hospital 960
NORTHAMPTON, MASSACHUSETTS
United States Veterans Hospital 555
NORTH CHICAGO, ILLINOIS
United States Veterans Hospital 667
NORTH LITTLE ROCK, ARKANSAS
United States Veterans Hospital 750
NORTHPORT, L. I., NEW YORK
United States Veterans Hospital 944
OTEEN, NORTH CAROLINA
United States Veterans Hospital 612
OUTWOOD, KENTUCKY
United States Veterans Hospital 375
PALO ALTO, CALIFORNIA
United States Veterans Hospital 1010
PERRY POINT, MARYLAND
United States Veterans Hospital 1015
PHILADELPHIA, PENNSYLVANIA
United States Veterans Hospital 416
PORTLAND, OREGON
United States Veterans Hospital 313
RUTLAND HEIGHTS, MASSACHUSETTS
United States Veterans Hospital 420
SAN FERNANDO, CALIFORNIA
United States Veterans Hospital 230
SHERIDAN, WYOMING
United States Veterans Hospital 438
ST. CLOUD, MINNESOTA
United Staets Veterans Hospital 494
SUNMOUNT, NEW YORK
United States Veterans Hospital 375
TUCSON, ARIZONA
United States Veterans Hospital 261



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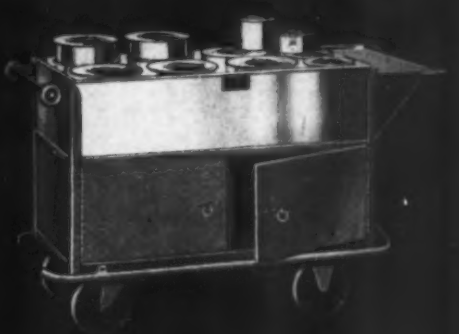

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United States Veterans Hospital 250
WHIPPLE, ARIZONA
United States Veterans Hospital 600

NATIONAL HOMES AND SANITARIUMS

DANVILLE, ILLINOIS
Danville Branch, National Home..... 263
DAYTON, OHIO
Cental Branch, National Military Home.1165
HOT SPRINGS, SOUTH DAKOTA
Battle Mountain Sanitarium 544
MARION, INDIANA
Marion National Sanatorium 1104
NATIONAL HOME, WISCONSIN
Northwestern Branch, National Home.. 941
NATIONAL MILITARY HOME, KANSAS
Western Branch, National Home..... 392
NATONAL SANITARIUM, TENNESSEE
Mountain Branch, National Home 1701
NATIONAL SOLDIERS HOME, MAINE
Eastern Branch, National Home 341
NATIONAL SOLDIERS HOME, VIRGINIA
Southern Branch, National Home 668
SOLDIERS HOME, CALIFORNIA
Pacific Branch, National Home..... 862

ALBERTA

BANFF
Brett Sanitarium 64
CALGARY
Calgary General Hospital 214
Holy Cross Hospital 200
CAMROSE
St. Mary's Hospital 50
DRUMHELLER
Drumheller Municipal Hospital No. 3.. 101
EDMONTON
*Edmonton General Hospital 200
Misericordia Hospital 175
Royal Alexandra Hospital 400
University of Alberta Hospital..... 362
LAMONT
Lamont Public Hospital 65
LETHBRIDGE
Galt Hospital 76
MEDICINE HAT
Medicine Hat General Hospital 146
RED DEER
Red Deer Municipal Hospital 35
VEGREVILLE
Vegreville General Hospital 40

BRITISH COLUMBIA

KAMLOOPS
Royal Inland Hospital 130
NEW WESTMINSTER
Royal Columbia Hospital 212
TRANQUILLE
Tranquille Sanatorium 330
VANCOUVER
Grace Hospital 300
St. Paul's Hospital 300
Shaughnessy Hospital 300
Vancouver General Hospital 1188
VICTORIA
Provincial Royal Jubilee Hospital 290
St. Joseph's Hospital 260

MANITOBA

BRANDON
Brandon General Hospital 234
ST. BONIFACE
St. Boniface Hospital 526
WINNIPEG
Children's Hospital of Winnipeg..... 110
Grace Hospital 288
Misericordia Hospital 225
Municipal Hospitals
King Edward Memorial Hospital... } 361
King George Hospital ..... }
St. Joseph's Hospital 125
Shriners' Hospital for Crippled Children —Mobile Unit 30
Victoria Hospital 120
Winnipeg General Hospital..... 650

NEW BRUNSWICK

CAMPBELLTON
Hotel Dieu Hospital..... 106
Restigouche and Bay Chaleur Soldiers' Memorial Hospital 52
CHATHAM
Hotel Dieu Hospital..... 52
EAST SAINT JOHN
Saint John County Hospital..... 200
FREDERICTON
Victoria Public Hospital..... 75
MONCTON
Moncton Hospital 101
NEWCASTLE
Miramichi Hospital 56
ST. BASIL
Hotel Dieu of St. Joseph..... 58
SAINT JOHN
St. John General Hospital..... 179
Saint John Infirmary..... 120
ST. STEPHEN
Chipman Memorial Hospital..... 77
TRACADIE
Hotel Dieu of St. Joseph..... 32
WEST SAINT JOHN
Lancaster Hospital 70
WOODSTOCK
*Carleton County L. P. Fisher Memorial Hospital 50

NOVA SCOTIA

AMHERST
Highland View Hospital..... 68
ANTIGONISH
St. Martha's Hospital..... 127
GLACE BAY
*Glace Bay General Hospital..... 100
St. Joseph's Hospital..... 100
HALIFAX
Camp Hill Hospital..... 244
*Children's Hospital 55
Grace Maternity Hospital..... 105
Halifax Infirmary 65
Victoria General Hospital..... 260
KENTVILLE
Nova Scotia Sanatorium..... 271
NEW GLASGOW
Aberdeen Hospital 85
NEW WATERFORD
New Waterford General Hospital..... 57
SYDNEY
*Sydney City Hospital..... 68
TRURO
Colchester County Hospital..... 47
YARMOUTH NORTH
*Yarmouth Hospital 70

ONTARIO

BRANTFORD
Brantford General Hospital..... 200
BROCKVILLE
*Brockville General Hospital..... 108
*St. Vincent de Paul Hospital..... 91
BYRON
Queen Alexandra Sanatorium..... 419
CHATHAM
*Public General Hospital..... 100
*St. Joseph's Hospital..... 100
FORT WILLIAM
McKellar General Hospital 226
GALT
Galt General Hospital..... 78
GRAVENHURST
Muskoka Hospital for Consumptives.... 308
HAMILTON
Hamilton General Hospital..... 570
Mountain Sanatorium 450
St. Joseph's Hospital..... 185
KINGSTON
Hotel Dieu Hospital..... 165
Kingston General Hospital..... 331
KITCHENER
St. Mary's Hospital..... 137
LONDON
St. Joseph's Hospital..... 160
Victoria Hospital 436
Westminster Hospital 540
NIAGARA FALLS
Niagara Falls General Hospital..... 60
OSHAWA
Oshawa General Hospital..... 94
OTTAWA
Ottawa Civic Hospital..... 660
Ottawa General Hospital..... 350
OWEN SOUND
General and Marine Hospital..... 108
PETERBORO
Nicholls Hospital 90
St. Joseph's Hospital..... 90
PORT ARTHUR
St. Joseph's General Hospital..... 162
ST. CATHARINES
St. Catharines General Hospital..... 185
ST. THOMAS
Memorial Hospital 110
SAULT STE. MARIE
General Hospital 90
SMITHS FALLS
*St. Francis General Hospital..... 50
*Smiths Falls Public Hospital..... 50
STRATFORD
Stratford General Hospital..... 125
SUDBURY
St. Joseph's Hospital..... 137
TORONTO
Christie Street Hospital..... 525
Grace Hospital 154
Hospital for Sick Children..... 374
Lockwood Clinic 50
Riverdale Isolation Hospital..... 399
*St. Joseph's Hospital..... 150
St. Michael's Hospital..... 600
*Toronto East General Hospital..... 134
Toronto General Hospital..... 955
Toronto Western Hospital..... 350
Wellesley Hospital 100
Women's College Hospital..... 80
WALKERVILLE
Metropolitan General Hospital..... 175
WESTON
Toronto Hospital for Consumptives.... 461
WINDSOR
Hotel Dieu of St. Joseph..... 132
Salvation Army Grace Hospital..... 124
WOODSTOCK
Woodstock General Hospital..... 65

PRINCE EDWARD ISLAND

CHARLOTTETOWN
Charlottetown Hospital 80
Prince Edward Island Hospital..... 67
SUMMERSIDE
Prince County Hospital..... 67

QUEBEC

LACHINE
*Lachine General Hospital..... 50
MONTREAL
Alexandra Hospital 155
Children's Memorial Hospital..... 115
Momeopathic Hospital of Montreal..... 115
Hôpital de la Misericorde and Catholic Maternity 600
Hôpital Sainte Jeanne D'Arc..... 211
Hôpital Sainte Justine, Pour Les Enfants 340
Hotel Dieu de Saint Joseph..... 300
L'Hôpital Notre Dame..... 306
Montreal Foundling and Baby Hospital 80
Montreal General Hospital, Central Division 400
Montreal General Hospital, Western Division 85
Royal Victoria—Montreal Maternity Hospital 790
*Sacred Heart Hospital 645
Shriners' Hospital for Crippled Children 60
Woman's General Hospital..... 225
QUEBEC
*Hôpital de l'Enfant Jesus..... 130
Hôpital du Saint Sacrament 280
Hotel Dieu du Precieux Sang..... 260
Jeffery Hale Hospital..... 140
ST. ANNE DE BELLEVUE
St. Anne de Bellevue Hospital..... 650
STE. FOY
Hospital Laval 270
ST. HYACINTHE
*St. Charles Hospital..... 135
SHERBROOKE
Hôpital General St. Vincent de Paul... 250
Sherbrooke Hospital 90
THREE RIVERS
*Hôpital St. Joseph..... 101

SASKATCHEWAN

CANORA
Hugh Waddell Memorial Hospital..... 54
HUMBOLDT
*St. Elizabeth's Hospital..... 52
MOOSE JAW
Moose Jaw General Hospital..... 180
Providence Hospital 88
NORTH BATTLEFORD
Notre Dame Hospital..... 56
PRINCE ALBERT
Holy Family Hospital..... 70
Victoria Hospital 71
REGINA
Regina General Hospital..... 434
Regina Grey Nuns' Hospital..... 226
SASKATOON
City Hospital 220
St. Paul's Hospital..... 250
SWIFT CURRENT
Swift Current General Hospital..... 50

AUSTRALIA

NEW SOUTH WALES
Lewisham Hospital, Sydney
Newcastle Hospital, Newcastle
Royal Alexandra Hospital for Children, Camperdown, Sydney
Royal North Sydney Hospital, Sydney
Royal Prince Alfred Hospital, Camperdown, Sydney
St. Vincent's Hospital, Sydney
Sydney Hospital, Sydney
VICTORIA
Alfred Hospital, Melbourne
Austin Hospital, Melbourne
Children's Hospital, Melbourne
Melbourne Hospital, Melbourne
Queen's Memorial Hospital, Melbourne
St. Vincent's Hospital, Melbourne
Women's Hospital, Melbourne

CHINA

Peiping Union Medical College Hospital, Peiping.

FRANCE

American Hospital, Paris

NEWFOUNDLAND

Notre Dame Bay Memorial Hospital, Twillingate
St. Anthony Hospital, St. Anthony

NEW ZEALAND

Auckland Hospital, Auckland
Cashmere Sanatorium, Christchurch
Christchurch Hospital, Christchurch
Dunedin Hospital, Dunedin
Wellington Hospital, Wellington

URUGUAY

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NEWS OF THE MONTH

Hospital Leaders Gather in Toronto for Three-Day Meeting

WITH a registration of 250 persons, the Ontario Hospital Association again scored a success in its annual meeting held at the Royal York Hotel, Toronto, on October 1, 2 and 3. Under the excellent guidance of R. H. Cameron, Toronto, the president, and Dr. Fred W. Routley, Toronto, secretary, an intensive program of great interest was presented.

Enjoyable social affairs were in evidence, with a luncheon held on the first day, featuring Dr. Malcolm T. MacEachern, director of hospital activities, American College of Surgeons, Chicago, as the speaker, and a dinner held on Thursday evening at which time Dr. G. Harvey Agnew, secretary, Department of Hospital Services, Canadian Medical Association; the Hon. Mr. Martin and the Hon. Dr. Robb were the speakers. The dinner was followed by a dance.

The delegates to the convention were welcomed by the mayor of Toronto, Maj. Bert. S. Wemp. This was followed by a summary of the report of the secretary, given by Doctor Routley, the report itself being distributed in pamphlet form. President Cameron then delivered his presidential address in which he warned the hospital superintendents of the mounting cost of hospitalization. His address was particularly well received. The program was completed with an address by H. M. Robbins, deputy provincial secretary.

On Wednesday afternoon the session was opened by a paper given by Frederick Lee, Stevens & Lee, Toronto, on "The Small Model Hospital." Mr. Lee detailed the many new ideas in hospital construction, particularly as it applies to various buildings in Ontario, many of them having been designed by Mr. Lee. This was followed by a short talk given by Chester J. Decker, superintendent, Toronto General Hospital, in which he described the nurses' call system and the feeding system used in his hospital. After these two papers, the delegates were taken to the Toronto General Hospital for a tour of inspection of the new and beautiful pavilion which has recently been completed.

Doctor MacEachern Leads Round Tables

The first part of the morning session on Thursday was given over to the transaction of business. This was followed by an interesting paper given by Dr. C. B. Farrar, director, Toronto Psychiatric Hospital. His subject was "The Relationship of the Mental to the General Hospital." This brought forth a general discussion of problems. In the afternoon Dr. J. M. McCutcheon, civil service commissioner for Ontario, outlined the relationship of the province to the hospitals of the province, and took up seventeen proposals that have recently been acted upon relative to monetary grants for municipal hospitals, and hospital accounting management. The remainder of the afternoon was spent in round table discussion led by Doctor MacEachern, at which time fourteen questions on various phases of hospital administration were discussed.

The first paper Friday morning was given by A. J. Swanson, superintendent, Western Hospital, Toronto. He took as his topic, "Hospital Management From the Standpoint of the Superintendent." This was followed by a paper by Dr. W. J. Dobbie, superintendent, Toronto Hospital for Consumptives, Weston, on "Financial Responsibility for Schools for Nurses." The last paper was delivered by Mrs. O. W. Rhynas, convener of the advisory committee, United Hospital Aids Association. Mrs. Rhynas discussed the relation of the United Hospital Aids Association to all hospitals and to the work they are doing. The afternoon session was given over to a report of the sections, and to two papers, the first given by Dr. J. L. Austin, professor of surgery, Queen's University, Kingston, on "The Medical Organization of a Large Hospital," and a paper by Dr. Ward Woolner, president, Ontario Medical Association, Ayr, on "The Medical Organization of a Small Hospital."

Dr. John Ferguson, Toronto, was installed as the new president, and the nominating committee reported that F. D. Reville, trustee, Brantford General Hospital, Brantford, had been chosen president-elect.

Hourly Nursing Service of Chicago Aided by Rosenwald

The Hourly Nursing Service of Chicago, sponsored by the Joint Committee on Hourly Nursing, has received from the Julius Rosenwald Foundation financial assistance that will cover all of the promotional expenses and half of the operating expenses of this organization.

Miriam Ames will assume the position as executive director on January 1, 1931.

The Hourly Nursing Service was initiated by the joint committee representing the Central Council for Nursing Education and the first district of the Illinois State Nurses' Association, in order to bring the best nursing service within the reach of persons of modest means and also to furnish nursing by appointment where full-time nursing is not needed.

Nursing groups throughout the country will watch with keen interest the development of this project because of its twofold purpose. The interest of the Rosenwald Foundation was secured because the service attempts to meet the nursing needs of the family of modest means.

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News of the Month

New Thirteen-Story Hospital for St. Louis University

St. Louis University, St. Louis, is to have a new hospital to be known as the Firmin Desloge Hospital, funds for which have been donated by the Desloge family of St. Louis. The hospital, which will be built as a memorial to the late Firmin Desloge, is expected to demand a cost of $1,250,000.

It will be thirteen stories high, and will be crowned with steep French roofs which will present a distinctive and picturesque silhouette. Surmounted high above the roofs will be a graceful Gothic flèche or spire of lead covered copper which will be painted black and topped with the cross and lacy Gothic ornaments covered with gold leaf. The top of the cross will be the very uppermost part of the flèche.

The hospital will be a teaching hospital and it has been planned for patients of moderate means.

Besides the general hospital building, the new university group will consist of a $100,000 convent for sixty Sisters of St. Mary's Order which will supply the administrative and nursing service of the Desloge Hospital.

New Nurses' Home to Cut Illness Costs at St. Luke's, Chicago

When the new $3,000,000 nurses' home and training school is completed at St. Luke's Hospital, Chicago, the illness costs for patients of moderate means will be cut 50 per cent, according to Charles H. Schweppe, chairman, board of trustees.

Construction of the new unit will release space on the third, fourth and fifth floors of the main hospital building now used as living quarters for student nurses, for the establishment of an eighty-one-bed unit for persons of moderate means and a fifty-bed unit for crippled children. The proposed eighty-one-bed unit will make possible nearly 28,000 additional days of treatment for approximately 2,400 patients yearly and will reduce the total cost of illness to patients occupying these rooms by 50 per cent. The total number of hospital beds will be increased to 790.

With the completion of the sixteen-story nurses' home and training school, St. Luke's will become the largest privately operated hospital in the United States, Mr. Schweppe says.

Louisville Hospital Plans Modern Five-Story Building

A modern five-story hospital of 140 beds is soon to be built on the present site of the John N. Norton Memorial Infirmary, Louisville, Ky.

The new building will be in the shape of a "Y." Every room will be open to sunlight, and all rooms facing the streets will have soundproof ceilings. The corridors also will be made soundproof. Strictly modern equipment will be used and ample operating facilities are contemplated. One entire floor will be used for a maternity and obstetrical department. A modern nurses' home, laundry and heating plant are already on the property and will be used in connection with the new structure.

A wing of the old building will be reconstructed throughout and used also in carrying out the expanded program of the hospital. Provision has been made in this building for facilities for the care of patients whose incomes enable them to pay only a medium rate.

This view of the future St. Luke's Hospital group, Chicago, shows the proposed new $3,000,000 nurses' home at the left of the present building.

VOLLRATH UTENSILS

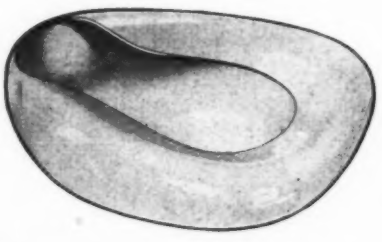
meet the most exacting hospital requirements

Designed after consultation with leading members of the profession—made for years of hard usage—chosen by best equipped hospitals.

ENAMELED ware for hospital use should be specially designed for the uses to which it is put, easy to sterilize thoroughly, and constructed to withstand hard usage.

Every piece of Vollrath Ware is designed and manufactured with these requirements in view.

Designs of the utensils are based on the recommendations of leading physicians and surgeons and hospital authorities. We cite, as an example, the special design of the Vollrath bed pan, with its high front and shallow back, or the Vollrath pus pan carefully shaped to fit the curves of the body.



STERILIZATION is made easy and certain by the elimination of seams and corners that harbor germs. All Vollrath Ware is seamless. It presents a smooth continuous surface to the sterilizing agent.

Long wear is assured by the careful honest construction of all Vollrath utensils: three coats of enamel fused on a heavy steel base at a temperature of 1700 degrees Fahrenheit. The result is a smooth glossy surface, easy to clean as china.

Because the enamel is applied at a temperature several times greater than that used in sterilization, it will not break down under the heat.

VOLLRATH Ware is non-porous. This makes it very slow to stain and preserves its snowy white appearance indefinitely.

All handles, spouts, and other attachments are made a part of the body of the vessel by gas-welding. They cannot come off or work loose.

Finally, in the variety of items and the wide range of sizes in which each is available, Vollrath Ware stands alone.

THESE are, we believe, the reasons so many of the country's newest and best equipped hospitals specify Vollrath Ware.

Your regular supply house will give you full information, or write us direct.

THE VOLLRATH COMPANY
Established 1874
Sheboygan, Wisconsin

News of the Month

California Sanatorium Heads Will Hold Meeting November 12

The annual meeting of the California section of the American Sanatorium Association will be held at Olive View Sanatorium, San Fernando, November 12.

The following program has been planned: Food Service and Costs, H. M. Andrews, assistant superintendent, Olive View Sanatorium; Per Capita Cost of Operating Tuberculosis Sanatoriums and Preventoriums, Dr. E. A. Schaper, superintendent, Stonybrook Retreat, Keene; What Should a Tuberculosis Sanatorium Clinical Record Contain and How Far Can It Be Standardized? Dr. Everett Morris, superintendent, Wish-i-ah Sanatorium, Auberry; How Much Extra Rural Work Should Be Done by the Medical Staff of a County Sanatorium in Its Own Territory? Dr. Chesley Bush, superintendent, Arroyo Sanatorium, Livermore.

Dr. Everett Morris is president of the section and Dr. Thomas C. O'Connor, Bret Harte Sanatorium, Murphy, is the secretary.

Osler Clinic to Be Ready by the First of the Year

It is expected that the new Osler Clinic, the first unit of the new medical and surgical clinic now in the process of construction at Johns Hopkins Hospital, Baltimore, will be ready to receive patients in January, 1931. This unit is the medical unit. Following the opening of the medical unit, construction will start on the Halstead Clinic, or the surgical unit. These two units will care for 165 patients and will increase the capacity of the hospital to 912 beds.

New England Deaconess Association Is Reorganized

The reorganization of the New England Deaconess Association, which has been in the process of reorganization for the past year, is now complete, according to a recent announcement.

The organization leaves the association as it formerly was with the exception of the hospitals, which have been formed into a new corporation known as the New England Deaconess Hospital. This new corporation includes the old Deaconess Hospital, the Palmer Memorial Hospital and the School for Nurse Training, all at Deaconess and Pilgrim Roads, Boston, overlooking the Fenway. This is an ideal location, says the announcement, and there is room for the expansion that is anticipated in the near future.

Caroline A. Jackson, superintendent, Deaconess Hospital, and Sadie A. Hagen, superintendent, Palmer Memorial Hospital, have resigned as superintendents and these offices have been abolished. The new administration is to have a superintendent, an assistant superintendent, a business manager and a superintendent of nurses and director of the training school.

Warren F. Cook, formerly of the Methodist Episcopal Hospital, Brooklyn, N. Y., who has had general supervision for the past year, has been elected superintendent of the administrative staff of the new corporation; Sadie A. Hagen has been elected assistant superintendent and Mabel McVicker, superintendent of nurses and director of the training school. A business manager is yet to be chosen.

"The work in the two institutions will go on as before with more efficiency and economy because of the closer coordination of departments, which has already proved its effectiveness as far as it has gone," the announcement concludes.

Western Reserve Medical Center Nears Completion

With two dormitories housing more than 400 nurses opened, the $16,000,000 Western Reserve Medical Center, Cleveland, is well on its way toward completion. It is expected that by the end of the year, the new Lakeside Hospital and the Hanna House adjoining will be ready for opening.

When completed the medical center will include the following buildings: nurses' dormitory, consisting of four sections; the Hanna House; Lakeside Hospital; Maternity Hospital; Pathological Institute; Babies' Hospital; medical school; power house; medical school dormitory; dental school; medical library.

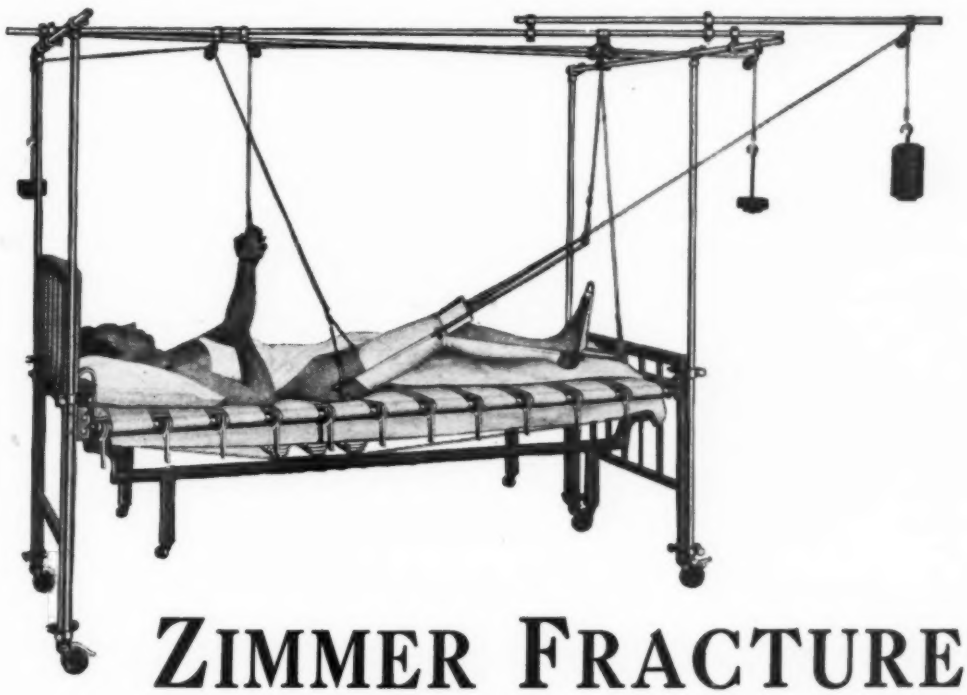
Sound Film Equipment Selected for Veterans' Hospitals

Selection of portable and permanent talking picture equipment by the United States Government for sixty-eight veterans' hospitals is of interest to every hospital and sanitarium. Sound films, as an important factor in aiding convalescence, in clinical work and in training personnel are taking a definite place. This order is the first from the United States Government for any considerable number of talking picture equipments and was placed by General Frank T. Hines, director, Veterans' Bureau.

When a hospital can offer well selected dramatic, educational and news reel talkies, there is an undoubted and favorable reaction in the out-patient department, if for no other reason than that pictures take the patients' minds away from their ills and difficulties. Since they tend toward obtaining the desired mental attitude they naturally aid in building morale.

Pennsylvania Sets Dates for 1931 Meeting

The Hospital Association of Pennsylvania has set as the dates of its next annual meeting, March 24, 25 and 26, 1931. The committee is already at work on the program, the sessions of which will be held in the Bellevue-Stratford Hotel, Philadelphia.



ZIMMER FRACTURE BEDS

Convenience to the nurse and comfort to the patient are the outstanding features of Zimmer Beds in the best equipped hospitals everywhere. Zimmer developed the adjustable back-rest, the trundle cot and the positive locking windlass; improvements that provide many distinct service advantages. All because Zimmer considers a fracture bed as being more than just a bed, as equally important in its essential features as an operating table. Nowhere in Zimmer Beds will you find convenience or patient comfort sacrificed for the sake of price. Inferior equipment may sell for less, but Zimmer quality and Zimmer features have long been preferred by discriminating hospital buyers. Investigate Zimmer Fracture Beds now. It pays to buy the best.

Improved Zimmer back-rest assures patient immobility. Back-rest remains in any desired position when trundle cot is lowered.

Zimmer special windlass provides easy and secure adjustment of supporting straps under the heaviest patient.

In addition to fracture beds, Zimmer manufactures quality metal splints for every purpose; extension, abduction and suspension apparatus; overhead frames and splint cabinets. In short, modern fracture appliances of every nature.

WRITE FOR CATALOGUES

Trundle cot can be readily lowered to floor and rolled from under bed for convenience in X-raying, changing linen, etc.

ZIMMER MFG. CO. WARSAW, IND.

News of the Month

Work Starts on $1,700,000 Addition to Brooklyn Hospital

Work has begun on the $1,700,000 addition to the Brooklyn Hospital, Brooklyn, N. Y., which involves a general expansion of the hospital plant.

The present accommodations for patients of moderate means will be increased by the addition of private wards, two beds in a room. There will be additional private rooms, new nurseries for general ward, private ward and private room infants, increased operating room facilities, and an extension to the nurses' home and alterations in the power plant. A squash racquet court will be provided for the use of interns and nurses.

When alterations and additions are completed the hospital will have 420 beds and the nurses' home individual bedrooms. It is expected that in the near future the dispensary facilities will be augmented by an extension to cost an additional $150,000.

Kansas Association to Meet November 8

The annual meeting of the Kansas State Hospital Association will be held in Newton, November 8.

The program for the morning has been planned as follows: The meeting will be called to order by the president, Dr. T. Restin Heath, Bethany Methodist Hospital, Kansas City, Kan., and the minutes of last year's meeting read by the secretary, Dr. J. T. Axtell, Axtell Christian Hospital, Newton. A report of the meeting of the American Nurses' Association at Milwaukee will be presented by Beulah Davis, superintendent of nurses, Axtell Christian Hospital.

In the afternoon J. A. Dent, assistant superintendent, Bell Memorial Hospital, Kansas City, Kan., will discuss the central hospital supply room; Dr. G. W. Jones, Lawrence Hospital, Lawrence, will read a paper on "Gastro-Intestinal Diagnosis From the Hospital Standpoint"; Dr. A. R. Hatcher, Hatcher Hospital, Wellington, will speak on "The Selection and Relation of the Medical Staff to the Hospital" and John E. Lander, financial secretary, Wesley Hospital, Wichita, will discuss the collection of hospital accounts.

Dr. Bert W. Caldwell, executive secretary, American Hospital Association, will conduct a round table and a business session will close the meeting.

League Calendar for 1931 Honors Florence Nightingale

Florence Nightingale's birthplace is the subject chosen for portrayal in the 1931 calendar of the National League of Nursing Education, now being offered for sale. The proceeds of the sale will be used to help maintain and develop the activities of the league, which is trying to help prepare better nurses for the community.

The 1931 calendar will present hitherto unpublished pictures of Florence Nightingale's birthplace, the Villa Columbaia in Florence, Italy. The frontispiece is the view from the garden over Florence, showing in colors the Duomo and Giotto's Campanile, with the Ponte Vecchio leading across the river to them, and with the hills near Fiesole as a background.

The price of the calendar is $1 a single copy, but only seventy-five cents a copy on all orders of fifty or over delivered in one shipment. The orders should be sent to the National League of Nursing Education, 370 Seventh Avenue, New York City.

Two Oxygen Chambers for Michael Reese, Chicago

Two oxygen rooms for the care of patients suffering from pneumonia, heart decompensation and other conditions requiring more than a normal supply of oxygen in the air they breathe have recently been opened at Michael Reese Hospital, Chicago. The rooms were made possible by a recent gift of $10,000.

The rooms at Michael Reese Hospital are different from the few other such rooms in this country in that they are constructed of regular building materials, whereas the others are built of special materials. They are airtight, and by means of the apparatus used can be filled with the necessary amount of air containing the correct percentage of oxygen in from three to five minutes.

Panama City Hospital Featured

The Hospital Santo Tomás, an exterior view of which was shown as a frontispiece in the September issue of THE MODERN HOSPITAL, is an establishment of an official character, financed and maintained by the Government of the Republic of Panama. It is situated in Panama City and not in Ancon, as stated in the table of contents of the September issue.

Heart Diseases to Be Studied in New Group of Laboratories

A group of laboratories designed for research in heart diseases has recently been opened at Michael Reese Hospital, Chicago. The laboratories were established by Fannie Wedeles, who gave $20,000 outright and created a trust fund of approximately $120,000 in memory of her husband, the late Emil Wedeles. Other contributors have generously aided in the establishment and maintenance of the new laboratories.

In connection with the laboratories there has been established a special cardiac clinic, with two full-time cardiac social workers who assist the doctors in adjusting patients to home, school and industrial problems. Special beds for the study of heart patients have been set aside in the general hospital wards. One of the activities of the heart group is providing postgraduate courses for physicians.

The clinic is part of the countrywide movement to prevent and control heart disease from which there has been a constantly increasing death rate.

Armour's

Surgical Ligatures

STRONG, SMOOTH, SUPPLE, STERILE

FRESH gut from a vast number of Government-inspected sheep is selected daily for Armour's Surgical Ligatures. Processing and sterilizing of the raw material start while it is still fresh. It is never frozen, never salted—protected against deterioration at every step. As a result Armour's Surgical Ligatures are dependably strong, smooth, supple and sterile, assuring firm holding stitches, even absorption, greater safety from irritation and infection. (Send for samples.)

Dependable products dependably prepared for more than a third of a century have established for the Armour Laboratory the reputation, "Headquarters for medical supplies of animal origin."

The Armour Laboratories prepare a complete line of dependable organotherapeutic products, including Suprarenalin Solution, Pituitary Liquid, Concentrated Liver Extract. The Armour Label identifies each product.

ARMOUR AND COMPANY

Chicago

"Headquarters for medical supplies of animal origin"

Armour's Surgical Ligatures are supplied as follows: Plain and Chromic, boilable and non-boilable, Regular (60-inch) lengths, sizes 000, 00, 0, 1, 2, 3, and 4. . . . Iodized, non-boilable, Regular (60-inch) lengths, sizes 00, 0, 1, 2, 3, and 4. . . . Plain and Chromic, boilable, Emergency (20-inch) lengths, sizes 000, 00, 1, 2, 3, and 4.

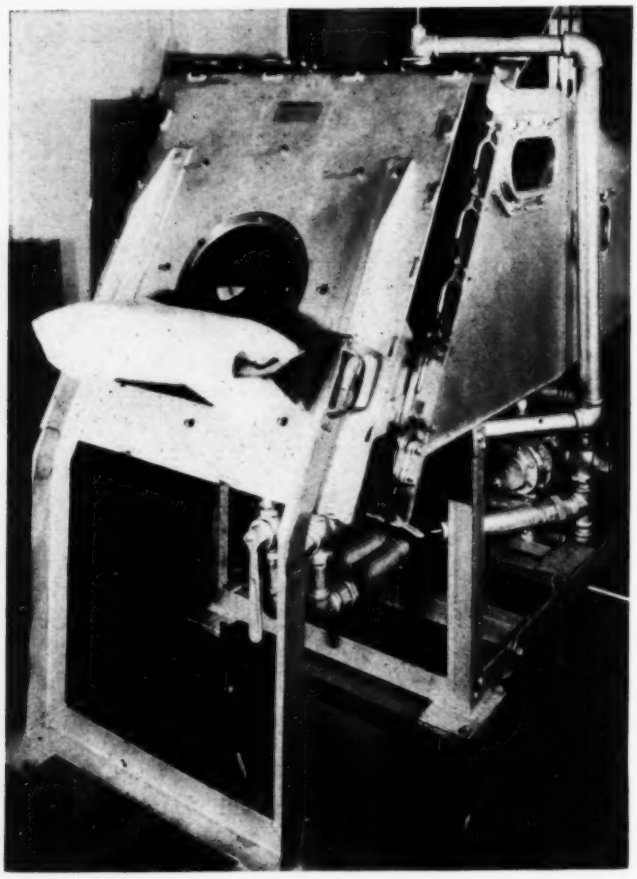
News of the Month

Respirator Is Newest Marvel of Medical Science

One of the newest marvels of medical science is the apparatus designed to prolong the administration of artificial breathing known as the Drinker-Shaw respirator. Prof. Philip Drinker and Louis A. Shaw, Harvard School of Public Health, are the inventors. The apparatus recently received nationwide publicity because of its effectiveness in saving the lives of a man on the Pacific Coast and a young woman at St. Luke's Hospital in Chicago.

The respirator consists essentially of an airtight tank connected to an electrical slow speed blower such as is used in ventilators. The artificial respiration tank with a cylinder 66 inches long and 22 inches in diameter is large enough to accommodate a man 6 feet 4 inches tall and weighing 225 pounds. It can also be used for a child.

The patient lies on a mattress placed on a truck which is attached to the lid of the tank. The head and neck of the patient extend beyond the lid through a rubber collar,



the head resting on a stand of adjustable height outside the tank. It is possible for a patient to live, sleep and eat in the respirator indefinitely.

When it is decided to place a patient in the respirator the collar is adjusted to the right size of the patient's neck and the position of the head determined. Then the patient is rolled into the tank. The lid and truck of the tank can be pulled in and out with ease.

By means of electrically driven blowers, alternate positive and negative pressures are applied to the air within the tank. Inspiration is caused by negative pressure and expiration by positive pressure.

The rate at which the pressure alternation takes place is controlled by a rheostat and variable speed motor. Respiratory rates varying from ten to forty a minute can be obtained. The amount of pressure is controlled by a valve which throttles down the air flowing to and from the pumps.

The latest respirator is regarded as the outstanding of its type in the world. The body of the machine is made of metal (usually sheet iron) welded at all joints. Rails in the forms of "channels" are welded to the inside. At the foot-end of the respiration tank is a valve which can be shut off so that the body of the patient will then be enclosed in an air tight cylinder. With the valve closed the apparatus becomes a true plethysmograph and, if it is connected to a suitable spirometer, records of breathing can be made without the use of any sort of mask, nose piece or mouth piece. It is a simple matter to close off the tank and use it as a plethysmograph to determine to what extent the patient is able to breathe.

It is also possible to rotate the tank about 75 degrees in both directions and the foot can be raised or lowered about 15 degrees with the horizontal. These maneuvers allow the patient to change his position.

On the sides of the tank are marine type glass portholes for observing the patient with numerous small holes (pipe taps) for inserting thermometers, attaching manometers, conecting pneumographs, blood pressure cuff or stethoscope. For taking x-ray photographs of chest movements, the glass of the porthole is replaced by a sheet of thin aluminum permeable to x-rays.

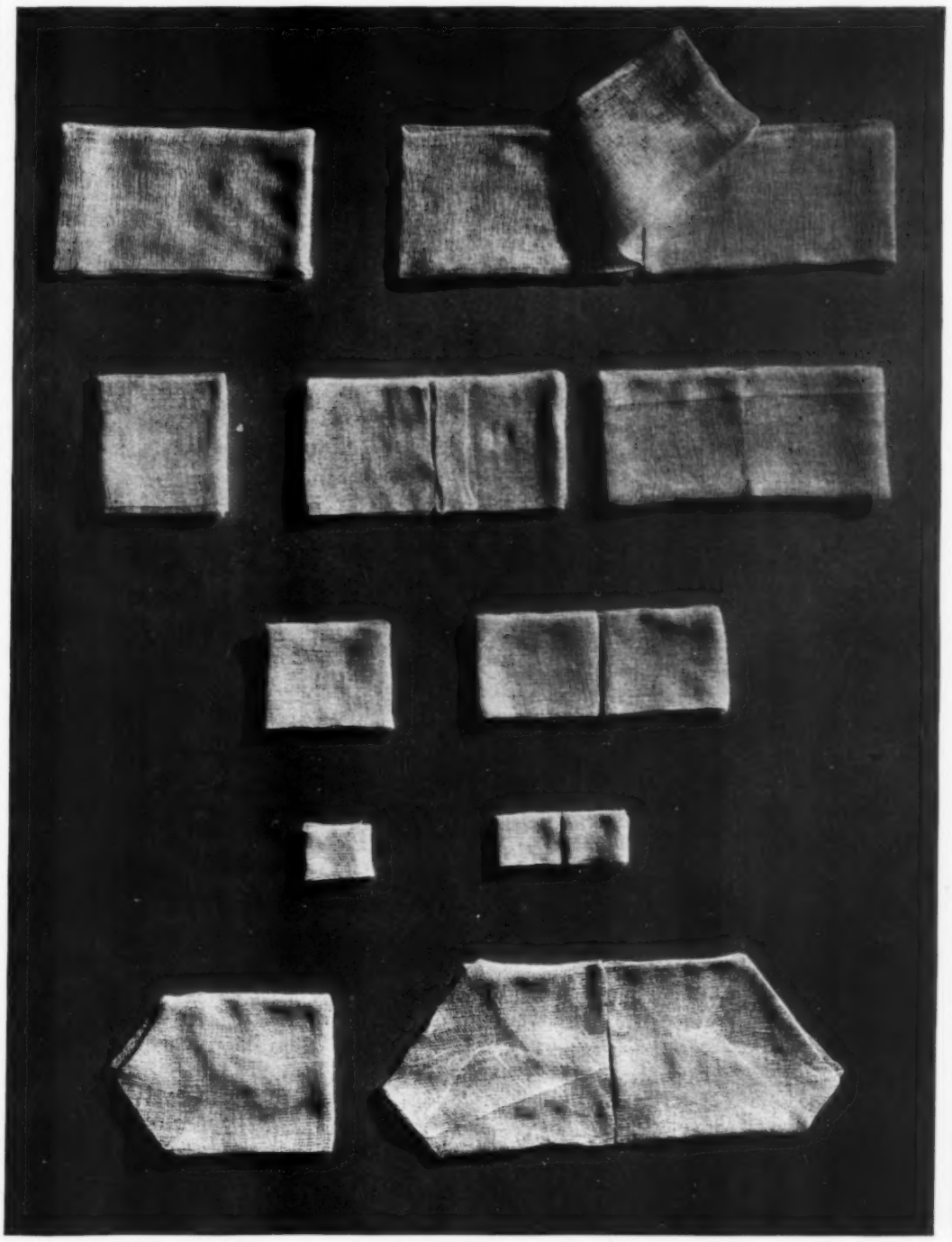
The chief purpose in making this apparatus was to secure a device for treating patients suffering from protracted cases of respiratory failure, such as are induced by severe monoxide poisoning, electric shock, morphine poisoning, poliomyelitis and the like. The important questions of how much pressure is needed to induce breathing in pathologic cases was estimated by using a number of normal men and women as subjects and observing their reactions.

Rosenwald Fund to Help New Mental Hygiene Institute

The Julius Rosenwald Fund has pledged itself to meet half of any deficit, not more than $17,500, which the Mental Hygiene Institute of the Pennsylvania Hospital, Philadelphia, may incur during its first year of operation, according to a recent announcement by Edwin R. Embree, president of the fund.

The institute was founded to bring psychiatric service within the reach of people of modest means. Heretofore the service has been available only to people of wealthier circumstances.

According to Mr. Embree, the institute, recently founded, may reasonably expect to face a deficit during its first year or its experimental stage. For that reason the Rosenwald Fund has promised to meet half of the deficit up to a certain amount.



Specifications

1. Large Sponge (8" x 4") 20x 12 Gauze 24" x 18" folded to approximately 8" x 4½", 12 ply.
   1000 to a box

2A. Medium Sponge (4" x 4") 20x 12 Gauze cut 18" x 18" folded to approximately 4" x 4", 16 ply.
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2. Medium Sponge (3" x 3") 20x 12 Gauze cut 12" x 12" folded to approximately 3¼" x 3", 12 ply.
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3. Small Sponge (2" x 2") 20x 12 Gauze cut 6" x 6" folded to approximately 1¾" x 1¼", 12 ply.
   5000 to a box

4. Pointed Sponge (6" x 5") 20x 12 Gauze cut 18" x 12" folded to five corner shape, approximately 6½" x 4¾". Ply varies in different parts of Sponge.
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FIVE BAY SPONGES THAT SERVE MANY PURPOSES

The tendency of many hospitals today is to use factory-made dressings which obviously have many advantages over those made in hospitals from the standpoint of economy, elimination of waste, convenience and uniformity of product.

Use the coupon to obtain samples of Bay's ready made dressings and complete uniformation.

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Kindly send me complete information and samples of your ready made dressings.

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Personals

DR. HARRY L. ROCKWOOD, health commissioner for Cleveland, has been named director, Mt. Sinai Hospital of that city. He succeeds FRANK L. CHAPMAN who is now in charge of the University Hospitals. DOCTOR ROCKWOOD became health director in 1918 and is recognized as one of the leading public health officials in the country.

DR. L. V. GUTHRIE, superintendent, Huntington State Hospital, Huntington, W. Va., died recently as the result of a heat stroke received in the summer.

ELIZABETH RUTLEDGE, who has been connected with Utica General Hospital, Utica, N. Y., has recently been named assistant superintendent.

DR. CHARLES E. REMY, formerly assistant superintendent, Michael Reese Hospital, Chicago, has been appointed superintendent, Minneapolis General Hospital, Minneapolis, to succeed DR. WALTER E. LIST who is now head of the Jewish Hospital, Cincinnati.

DR. N. P. COLWELL, secretary of the council on medical education and hospitals, American Medical Association, Chicago, has been granted a leave of absence until January 1, because of ill health.

DR. FRANK L. S. REYNOLDS has been named superintendent, Grand View Hospital, Ironwood, Mich., succeeding DR. WALTER REINEKING, who accepted the superintendency of the Madison, Wis., County Sanatorium.

DR. GEORGE R. MURPHY, who for the last two years has been night superintendent, Boston City Hospital, Boston, has resigned.

SISTER MARY HILDA has been chosen superintendent of St. John's Hospital, Long Island City, replacing SISTER LEO XAVIER, who will go to St. Joseph's High School, Brooklyn, as principal. SISTER MARY HILDA was head of St. John's Hospital from 1921 to 1927.

DR. R. J. HANNA, medical superintendent, Fairmont Hospital, Kalamazoo, Mich., has been appointed medical superintendent, Jackson County Tuberculosis Sanitarium, Jackson, Mich.

THOMAS R. ZULICH, for twenty-four years superintendent, Paterson General Hospital, Paterson, N. J., died recently following a heart attack. Supervisory duties are being carried on at present by EDNA N. SPROAT, assistant superintendent.

DR. W. L. WHITTINGTON, superintendent, Weimar Joint Sanitarium, Weimar, Calif., died recently following an illness of several months.

CAPT. RALPH W. PLUMMER, retired United States navy surgeon, has been named medical director, Hahnemann Hospital, Philadelphia.

DR. HARRY E. MARSELUS, formerly assistant directing officer, East Moline State School, East Moline, Ill., has been transferred to the state school at Dixon, Ill. He will be succeeded by DR. WILSON K. DYER of the state hospital at Peoria, Ill., and DR. HENRY B. KNOWLES of the Dixon school will take DOCTOR DYER'S place.

CECILE TRACY SPRY, superintendent, Hahnemann Hospital, Portland, Ore., succeeds CAROLYN DAVIS as superintendent of Everett General Hospital, Everett, Wash.

SISTER MARY PHILOMINE has taken over the management of St. Francis Hospital, Wahpeton, N. D., succeeding SISTER MARY CECELIA. SISTER MARY PHILOMINE has been manager of St. Ansgars Hospital, Moorhead, N. D., for the last three years.

ROXANNA GRAY, superintendent, Greene County Hospital, Waynesburg, Pa., for the last five years, has accepted the superintendency of the Latrobe Hospital, Latrobe, Pa., succeeding ELFIE UNDERCUFFLER, who is now with the Frick Memorial Hospital, Mt. Pleasant, Pa.

FRANCES L. CHASE, R.N., is the new superintendent of Dinuba Hospital, Dinuba, Calif.

E. WOOD is the newly appointed head of Coleman Miners' Union Hospital, Coleman, Alberta, Canada.

A. H. SIMMONS recently assumed charge of the Alliance City Hospital, Alliance, Ohio, succeeding F. W. HOOVER who is now superintending the Elyria Memorial Hospital, Elyria, Ohio.

DOROTHY MORSE is the new superintendent of the Waldo County General Hospital, Belfast, Me. She was formerly connected with the Middlesex Hospital, Middletown, Conn.

JAMES A. BELYEA is the new superintendent of the Toledo Sanitarium, Toledo, Ohio.

JULIA T. DAINWOOD, R.N., has recently been appointed to head the Albert Pike Hospital, McAlester, Okla.

H. D. MCCULLOUGH is the recently appointed superintendent of Fort Peck Indian Hospital, Poplar, Mont.

BEATRICE M. SMITHSON has been chosen to head the Wheeler Hospital, Gilroy, Calif., as superintendent.

FLORENCE M. DOE, superintendent, Baker Sanatorium, Charleston, S. C., has succeeded CAROL MARTIN, resigned, as head of the Community Hospital, Glasgow, Ky.

VERE HARLAN, R.N., is the new superintendent of the Daviess County Hospital, Washington, Ind. MISS HARLAN was formerly superintendent, Robinson Hospital, Robinson, Ill.

FRANCES AYLESWORTH, R.N., has recently been appointed head of the Ideal Hospital, Endicott, N. Y., succeeding MARGARET S. WILSON, R.N.

MARY F. SPIRES, formerly assistant director of nursing, Hermann Hospital, Houston, Tex., has been named superintendent, Houston Eye, Ear, Nose and Throat Hospital.

DR. JAMES L. BEVANS has resigned as director of the John D. Archbold Memorial Hospital, Thomasville, Ga. DOCTOR BEVANS is leaving the hospital field and after a period of travel will live in Washington, D. C. He was formerly a medical officer of the regular army and now holds the rank of colonel, U. S. A., retired. DOCTOR BEVANS has been director of the John D. Archbold Memorial Hospital since the founding of that institution. His resignation becomes effective February 1, 1931.

I'm Failure

If you have had even a little to do with plumbing installations, especially in public and semi-public buildings, you know these ignoble three.

Their method of attack is simple. They wait until they can take advantage of human carelessness, human failings or defects and faults in the installation.

The Clow Soldier of Sanitation is your most logical ally in your constant battle against these three.

It is his job to design and construct for public and semi-public buildings as well as dwellings, plumbing fixtures that will compensate for carelessness, human failings and human uncleanliness.

I'm Short Life

To gain his end the Clow Soldier of Sanitation has developed the most complete line of specialized fixtures in the world, with particular types and designs to meet every conceivable condition in schools, hospitals, industrial plants and similar public buildings.

He has developed manufacturing safeguards to an unheard-of degree, actually putting each fixture through tests, based upon what it will meet on the job, before shipment.

I'm Insanitation

And at his fingertips are 52 years of experience in working out the most acute and most difficult plumbing problems.

He is your ally against plumbing *Failure* and its resulting repair costs—against *Short Life* and the resulting high replacement costs—against *Insanitation* and its hideous dangers. Call him in.

Ask for a Copy

Clow has specialized catalogs detailing special fixtures for schools, hospitals, industrial plants and similar public and semi-public buildings. Because these lines are so unusually complete you will be interested in the book. Ask for a copy today.

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Consult your architect

NURSING AND THE HOSPITAL

Conducted by M. HELENA MCMILLAN, R.N.,
Director, School of Nursing, Presbyterian Hospital, Chicago

Reducing Illness Costs by Means of Organized Nursing Service

By DAISY DEAN URCH, R.N., A.M.
Visiting Instructor, Department of Nursing Education, University of Washington College of Sciences, Seattle

TO paraphrase the famous message of Dr. Olin West, secretary, American Medical Association, "The one great outstanding problem facing the nursing profession to-day is that involved in the giving of skilled nursing care to all of the people, rich and poor, at a cost which can be reasonably met by them in their respective stations of life." How this can be done and how at the same time nurses can receive adequate incomes has been the topic for countless discussions and much experimentation during the last decade.

All nurses are familiar with the Committee on the Grading of Nursing Schools which is in the fourth year of its five-year program of a nationwide study of nursing. Their reports on supply and demand of nurses, the economic status of the nurse and nursing education conditions are worthy of careful study. Fortunately for all concerned, the committee is supported by physicians and lay persons as well as by nurses. We may therefore expect from it exact data and unprejudiced opinions, and we are, I believe, getting just what we expect. Also in the experiments which have been undertaken to cut down nursing costs, the cooperation of physicians, patients, nurses and hospital executives has been secured. This all augers well for the solution of this problem. It is important, I believe, that we rid ourselves of emotional bias and look the facts squarely in the face.

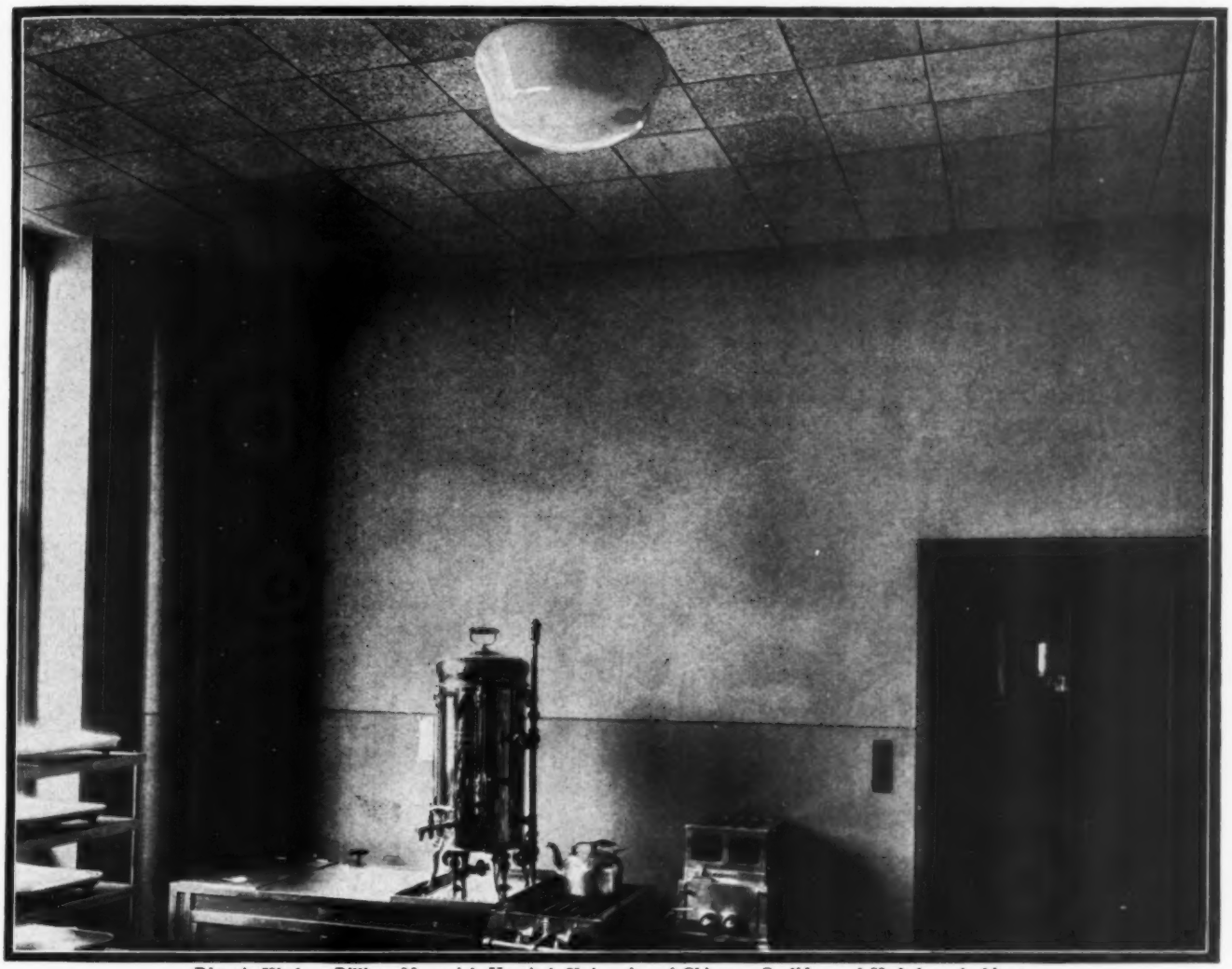
In order that we may better understand the ineffectual wailing over the "commercializing" and "overeducation" of the nurse at the expense of the patient, let us find out the reason for it. One of the reasons is, I believe, the fact that the nursing profession has its roots in the church with its ideals of service—service without pay other than spiritual rewards. Since the time of Phoebe, the first Christian visiting nurse, to the present time, we have had those who nursed for little or nothing. Free hospital care has been given by religious groups, and kindly neighbors have contributed their services in homes. Our endowed or tax supported hospitals and visiting nurse associations have carried on the good work. Physicians have given their services, and thus for centuries the great majority of patients have not had the painful experience of parting with their money to pay for care when they were ill. Two other factors influence this attitude. No one enjoys illness, and most people believe that disease just comes and that they are in no wise to blame for it. Hence, a general attitude of evading this responsibility has developed.

In 1929, as much money was spent for cigars and cigarettes as for hospital bills, twice as much for movie tickets and four times as much for gasoline and automobiles. A man goes to a hotel and cheerfully pays $7 to $10 a day for a room and meals with no personal service. The same man will go to a hospital and for an equal amount of money will expect as good a room, as expensive meals served in bed, and the personal services of a nurse, dietitian, technician and all the expensive hospital equipment thrown in.

The problem has developed from an attitude toward paying for illness that is unwholesome and unfair. I think the solution is publicity to bring about a frank facing of facts with the hope of changing this attitude and bringing about a sense of fair play on the part of patients and their relatives and friends. Physicians and nurses receive expensive educations, which represent long hard work, application to duty and self-denial, as well as money. They are expected to pay their personal bills. Recent studies have shown that the average private duty nurse works twenty-one days a month. She must pay for room and food for thirty days a month. While the patient is paying $7.50 a day the nurse receives only $6 of the fee. That gives her a yearly income of about $1,300, without vacation or days off with pay. The average yearly income of physicians in proportion to the expense of their education is about the same.

Furthermore, much of the sickness, the expense of which physicians and nurses are expected to bear, is preventable. Immunization against at least four of the communicable diseases is possible, and a dozen others can be prevented by clean sane living. Abstinence from intoxicating drinks and other dissipations and careful driving can still further lower the amount of sickness. The twenty-four dollars per annum paid by the average person for sickness could probably be reduced at least one-half if these precautions were universally taken. If

A MESSAGE TO HOSPITAL OFFICIALS FROM THE UNITED STATES GYPSUM COMPANY



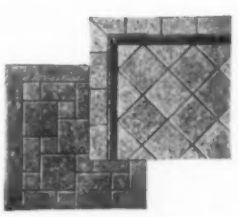
Dietetic Kitchen, Billings Memorial Hospital, University of Chicago. Coolidge and Hodgdon, Architects.

How Disturbing Noise can be Abated in the Modern Hospital

NOISE abatement has long been a real problem for the modern hospital. Now modern research and experimentation have made acoustical correction an accurate and exact science, one which leaves nothing to chance or guesswork, and one which definitely assures reduction in noise levels.

Through the use of Acoustone, the USG acoustical tile, many hospitals have already eliminated the disturbing noises caused by talking, footsteps, telephones, radios, bells, elevators, creaking carts, delirious patients, etc. This scientific sound absorbing material creates a comfortable noise level by greatly reducing the reflection of sound waves.

A mineral material resembling Travertine stone, Acoustone is supplied in varied shapes, sizes and colors which lend themselves to a great variety of decorative schemes. Without structural alterations or interruptions, it may be easily and quickly applied over present walls and ceilings. Acoustone is fireproof, sanitary and may be easily and economically cleaned.



The many designs, patterns and color combinations which may be obtained with Acoustone make its use highly desirable in connection with any type of masonry, as well as other interiors.

If you are interested in abating noise in your hospital, one of our experts will gladly make a study of the problem in your institution. His recommendations will be without obligation. Should these be accepted, we will supply the material, supervise its installation and assume full responsibility for the predicted results. Address the United States Gypsum Company, Dept. 4211, 300 W. Adams St., Chicago, Ill.

U.S.

A C O U S T O N E

the average person would invest one-half the money he spends for cigarettes, radios, automobiles or movie tickets in a good insurance policy he would unquestionably be able to pay for his illness.

A fairly large proportion of the cost of illness (an estimated 30 per cent) is the hospital bill. This could be lessened if hospitals were more efficiently managed. Practically all hospital executives learn their jobs by the trial and error method and at the expense of the institution they serve. There is also much waste of time and energy and strain on dispositions because of poor construction and inconvenient arrangement in hospital buildings. Why anyone should think that a doctor, a nurse, a business man, a broken-down minister or a vote-getter should by virtue of being any one of these things necessarily be a good hospital executive is beyond comprehension. To be a skillful doctor or an expert nurse does not imply that a man or a woman has executive ability. Yet both doctors and nurses with executive ability make splendid hospital administrators after they have learned the art. It is poor economics, however, for an institution to allow them to learn it at the institution's expense. We have schools for preparing physicians, nurses, teachers, engineers, even business men. Why not schools for training hospital executives? In the planning of hospital buildings, all the workers who know the details of their departments and who work there should be called in conference with the architects. No one person could possibly be expert in matters relating to every department.

Then there is the economic waste in nursing service. With the present accounting systems in hospitals, it is not possible to tell the exact cost of nursing service. Except in the case of special nurses, the cost of nursing is grouped with the charge for room, food, food service and upkeep of hospitals. Even the special's board bill is a much mooted question. We know, however, that the nurse cannot charge less than she is now charging.

Flexible Nursing Service Needed

It is also true that while the nurse is working longer hours and receiving smaller pay than any other worker, much of this time is of no value to the patient. The patient's husband may be paying for twenty-four hours of nursing service a day while she actually needs only four hours. But nursing in hourly packages is provided in few hospitals or homes, and patients are inclined to want frills and de luxe care and the prestige of a special nurse. It is pleasing to have these little personal attention, "to be wrapped in the cotton wool of nursing service," as Doctor Burgess expresses it. Then there is the real fear that comes to the patient and his family and drives them to make any sacrifice in order to have a nurse at hand every moment of the patient's illness.

The answer to this problem is a nursing service for both the hospital and the home that is flexible enough to meet the actual needs of all the patients in the amounts and at the times and places required. This, of course, calls for engineering on a large and far-sighted basis and the concerted efforts of the best minds in the community. Real statesmanship is needed. I should like to see established a glorified bureau of nursing service, with a board of trustees, including physicians, surgeons, public health officials, hospital executives, business men, public-spirited citizens and nurses (including those engaged in institutional, public and private duty work).

This bureau would serve a large area, would have a revolving fund and would plan its budget to provide for nursing by the hour or the job in homes and hospitals and for public health agencies. The hourly, visiting and special nurses would receive regular salaries paid by the bureau. Public health organizations and hospitals would pay their regular staff as at present and would call on the bureau for extra help when such was needed. Individual patients in both homes and hospitals could buy nursing service from the bureau by the hour, whether it were for one hour or for twenty-four hours. Each bureau could survey its community and keep an adequate number of the needed types of nurses. Vacations could be given at quiet periods. The personal touch need not be lost. Does this sound too millennial?

As a matter of fact every phase of this plan is now being successfully carried out, except the central board with the funds. We have visiting nursing and hourly nursing and group nursing and general duty nursing now. The University Hospital, Ann Arbor, Mich., the Henry Ford Hospital, Detroit, and many others have salaried special nurses. The New York, Chicago and San Francisco Visiting Nurses' Associations and many registries provide nursing in the homes. These arrangements have been worked out in response to demands and have succeeded because they met the actual needs of the people. There are now larger needs and we must meet them. If the whole community were organized some of the most difficult problems would be solved.

Problem Is Manysided

I see five phases of the problem confronting us. The solution is a challenge that can be met only by good team work on the part of all groups concerned—social workers, physicians, hospital executives, nurses and patients (including prospective patients).

First, patients do not like to pay for their illnesses and too frequently try to evade their responsibility for doing so. Yet they willingly pay for cigarettes, cosmetics, radios, automobiles, gasoline, chewing gum and movies. The public should be educated to recognize the value of good medical, nursing and hospital care and to be as willing to pay for it as for other luxuries.

Second, illness with its inevitable cost could be greatly lessened if people lived hygienically and availed themselves of preventive measures now known to medical science. There should be more intensive programs in schools and elsewhere to induce people to prevent disease and accident and to value health.

Third, provision for paying for illness is usually not made. Illness is made an excuse for an orgy of needless expenditure. About one-fifth of the cost is spent on nostrums and quacks. People must learn to budget or insure for illness and to make plans for spending this money wisely and well. They must also learn to pay for all they demand.

Fourth, hospitals and hospital equipment are expensive. Because of poor planning and amateur management, most hospitals are needlessly costly. Physicians and nurses with ability and taste along this line should take special courses to prepare themselves to become hospital executives. Nurses, dietitians and other hospital experts should assist in planning, building, equipping and supplying hospitals.

Fifth, nursing is expert trained personal service. Although it is estimated that only 7 per cent of the total cost of illness is paid to both trained and practical nurses, this is unevenly distributed and falls heavily at inopportune times. There should be organized community projects whereby hourly or visiting nursing in homes and group or hourly nursing in hospitals can be obtained on an adequate, reasonable, not de luxe, basis.

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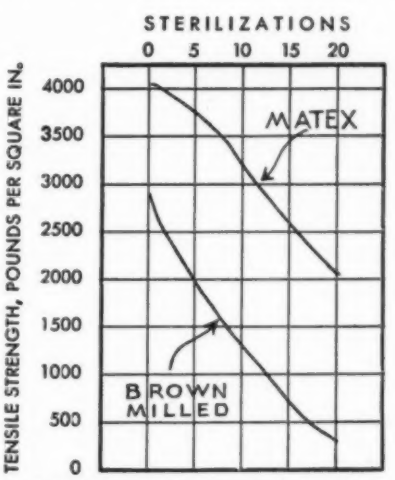

A chart of comparative tests made by rubber technologists showing difference in strength of MATEX and brown milled gloves after successive sterilizations.

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DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by ANNA E. BOLLER, Central Free Dispensary at Rush Medical College, Chicago

How Food Cost Studies May Be Applied to Menu Planning

By S. MARGARET GILLAM and ISOLA DENMAN
Department of Dietetics, University Hospital, Ann Arbor, Mich.

THE dietitian who plans the menus for an institution realizes the advantages of having available and easily accessible information concerning the cost of food.

How can the dietitian plan wisely unless she knows the trend in market prices? How, also, can she make possible the pleasant surprises by the use of some of the more expensive foods, unless she has definite knowledge of costs and unless, by saving on certain items, she may at intervals go into the realm of the almost forbidden foods? This makes possible the variety that is one of the most essential considerations in good menu planning. A plan is suggested in this article for keeping this information constantly before the dietitian with suggestions for its application.

The cabinet file of the drawer type is probably the most concise method of recording and having quickly available this information. A 500-card unit will be ample for any institution. A 6 by 4-inch card, with visible information on the article of food, the brand, the unit and the price is used in the file. On this card may also be listed more detailed information as to the purchase unit, the unit cost, the cost per serving portion and the quantity required to serve the entire hospital or to serve various groups as they divide into, possibly, private patients, ward patients and personnel. In the average hospital, the quantity used will remain fairly constant and the dietitian knows at a glance the standard amount to serve the various groups. By multiplying this quantity by the unit cost, she can quickly estimate the cost of serving the commodity to one or all groups.

The time required for pricing might be raised as an objection in that the dietitian would not have time to keep her files up to date, but if the quantity used remains fairly constant, if contracts are made for dairy products, meat and canned goods, and if groceries are purchased on a bid every three months, it will not necessitate an impossible amount of work. The advantage of working with prices

UNIVERSITY HOSPITAL
FOOD QUANTITIES AND COSTS

ARTICLE OF FOOD	PURCHASE UNIT	UNIT COST	PORTION COST	50 PORTIONS	120 PORTIONS	300 PORTIONS	1200 PORTIONS
Tomatoes, Canned	No. 10	.454	.018	2 Cans	5 Cans	3½ Cs.	8 Cs.

6 No. 10 Cans Per Case
1 No. 10 Can Makes 25 Portions ½ Cup Each

FOOD	BRAND	UNIT	UNIT COST
TOMATOES	G.T.P.	No. 10 Can	$ 454

Fig. 1. A sample card of an effective filing system that enables the dietitian to plan her meals wisely is shown here. This card gives at a glance detailed information on canned tomatoes showing the brand, the unit cost per can, the cost per serving portion and the amount needed to serve a convenient unit or number of persons in the hospital.

PRACTICAL to use— ECONOMICAL to store—

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And the Gorham hot water plate is constructed to save time—dozens of them can be filled quickly and easily from the same tap.

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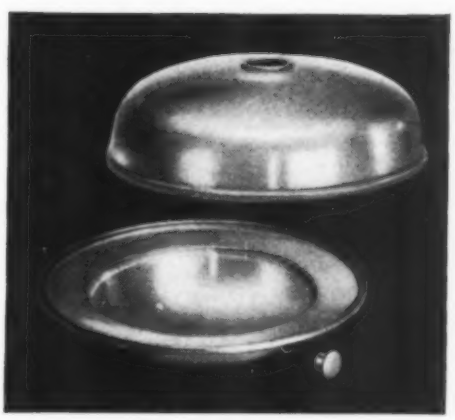

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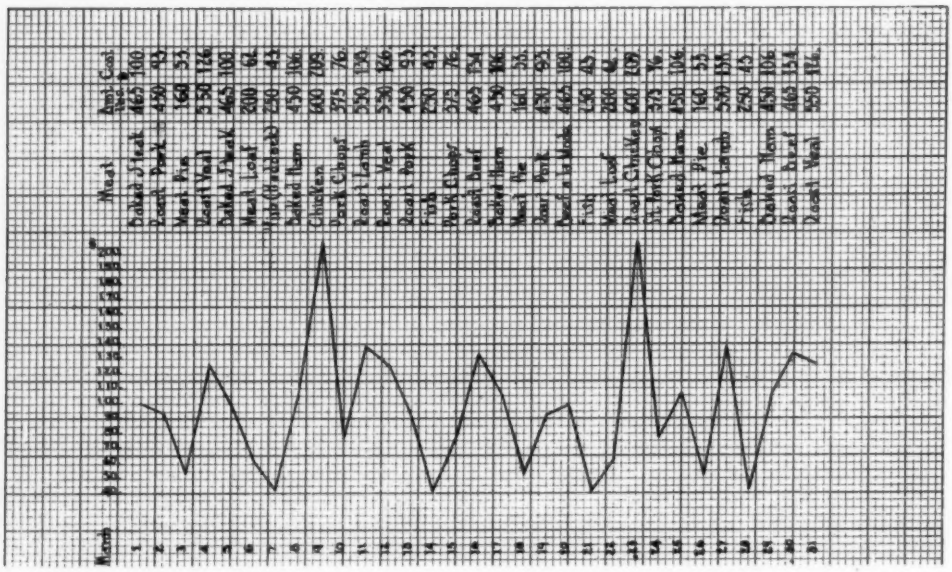


Fig. 3. This chart demonstrates graphically the comparative costs of dinner meats for March, 1930. The total cost was $3,000 and the average cost per day, $97. It will be noticed that the apparent high curve of costs is balanced by the lower curves.

Fig. 2. This recipe card gives the proportions for devil's food cake. The cards in this file are of value for recording standardized recipes as the food on the menu becomes more intricate in composition.

UNIVERSITY HOSPITAL RECIPE

DEVIL'S FOOD CAKE

80 PORTIONS	1200 PORTIONS	INGREDIENTS	UNIT	UNIT COST	TOTAL COST
4½ C	33 #	Sugar	#	.056	1.85
9	7 qts.	Eggs	doz.	.25	2.92
1 #	16 #	Butter	#	.35	5 60
2 C	7½ #	Cocoa	#	088	.66
2 C	8 qts	Hot Water	~/c		
9 C	33 #	Flour	#	036	1.19
2 T	1 #	Soda	#.	.025	.03
1 T	1 C	Vanilla	qt.	1.25	.31
3 t	9 oz.	Salt	oz.	.0005	.---
3 C	2¾ gal.	Buttermilk	gal.	.20	55
					# 13.11

CHOCOLATE FROSTING

8 C	33 #	Powdered Sugar	#	058	1.91
½ C	4½ #	Butter	#	.35	1.49
1 C	3¼ qts	Cream 20%	qt	.309	1.00
½ C	2 5/8 #	Cocoa	#	088	.23
					# 4.63
			TOTAL COST		17.74

RECIPE	UNIT	SIZE OF PORTION	AVERAGE PORTION COST
DEVIL'S FOOD CAKE	1 SHEET 16" × 24"	80 PORTIONS 2" × 2⅓"	$0.015

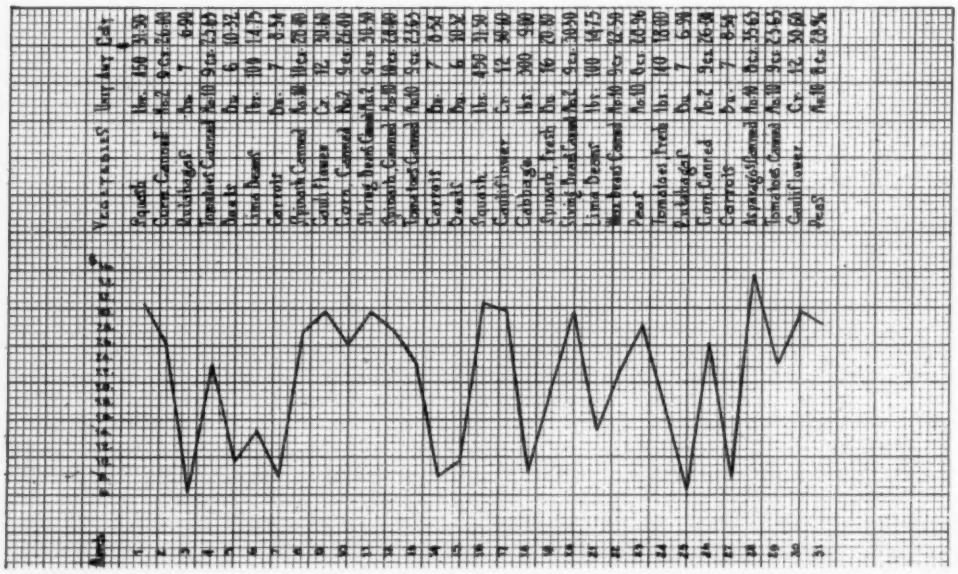
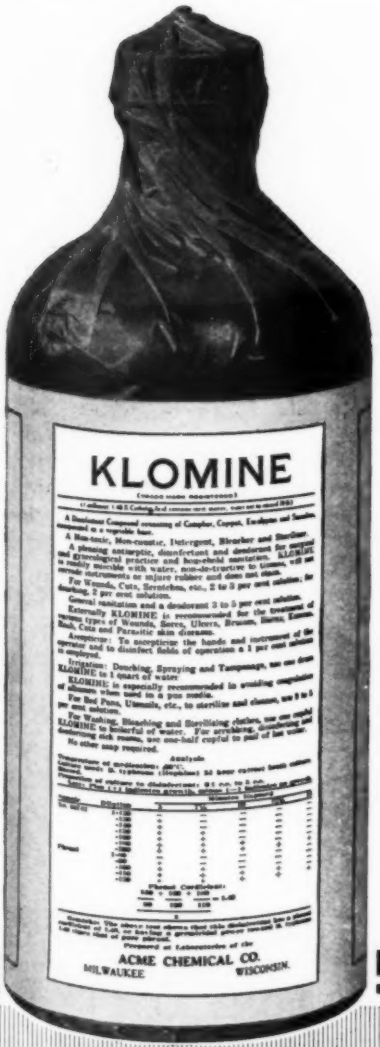


Fig. 4. This chart compares the cost of dinner vegetables for March, 1930. The information here shows the date of service, the total amount needed, the total cost and the comparative cost of the vegetables used for dinner each day during the month.



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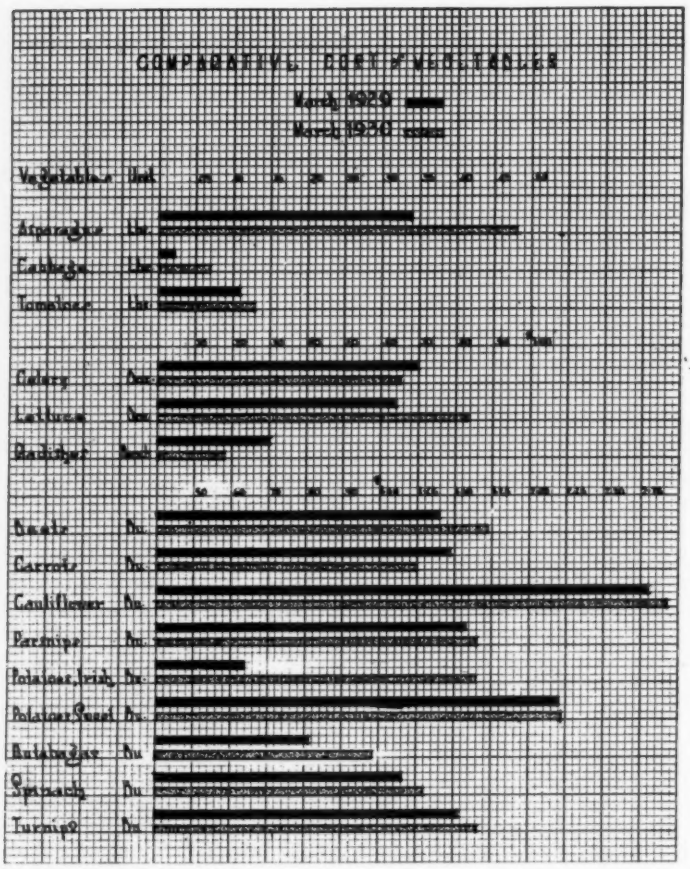

is that the dietitian, even if she does not buy, is constantly in touch with the cost of commodities. In instances where the dietitian is in charge of the hospital stores, the cards may be changed somewhat to serve also as a perpetual inventory record. A sample card is shown in Fig. 1.

As may be observed in Fig. 1, detailed information on canned tomatoes is available at a glance. It gives the brand of tomatoes, the purchase unit of a No. 10 can, the unit cost per can, the cost per serving portion ($.018), and also the amount needed to serve a convenient unit or number of people in the hospital. This will vary with the institution and will be influenced by whether or not the unit to be served is fifty persons, 1,200 persons or otherwise.

The visual file may be used not only to record information on commodities as purchased, but also to record the standardized recipe as the food on the menu becomes more intricate in composition, such as cakes, pastries and desserts. Fig. 2 gives such information on devil's food cake. The unit is one cake sheet 16 by 24 inches, which cuts eighty portions 2 by 2⅓ inches, with a portion serving cost of $0.015.

This perhaps brings up the discussion of the standardized serving portion. In calculating food costs, it is necessary to know what the standardized service portion is—whether it is a half cup of vegetables, a piece of cake of certain proportions or the number of stewed prunes to a serving. If the standardization of serving portions is observed throughout the institution, employees can be so instructed regarding it, which results in better control of the food service throughout the institution and in lessened food waste. This should not interfere with the giving of second servings. Such requests are in the minority, however.

Many hospital accounting departments desire to acquire costs of operating special diet units, metabolism units or perhaps guest dining rooms as well as cafeterias for personnel. With the unit cost per serving portion easily attainable through the file, it is a fairly simple procedure to price items transferred, for instance, from the bakery to the special diet kitchen. For the serving of food in a guest dining room it gives the basis for the price to be charged, depending upon the profit that is to be made.

Too much cannot be said for the standardized recipe. It ensures a standard product of uniform quality. Through its use it becomes possible also to obtain the actual composition and calorie value per serving.

The knowledge of portion costs is of the greatest help to the dietitian who plans the menus. She knows that canned tomatoes at $.018 a portion will cost $21.60 for 1,200 persons and that devil's food cake at $.015 for the same number will cost about $18. This information guides the food costs from day to day. The cost per portion of each item is known sufficiently accurately so that the cost of each meal, as well as the total cost of food for

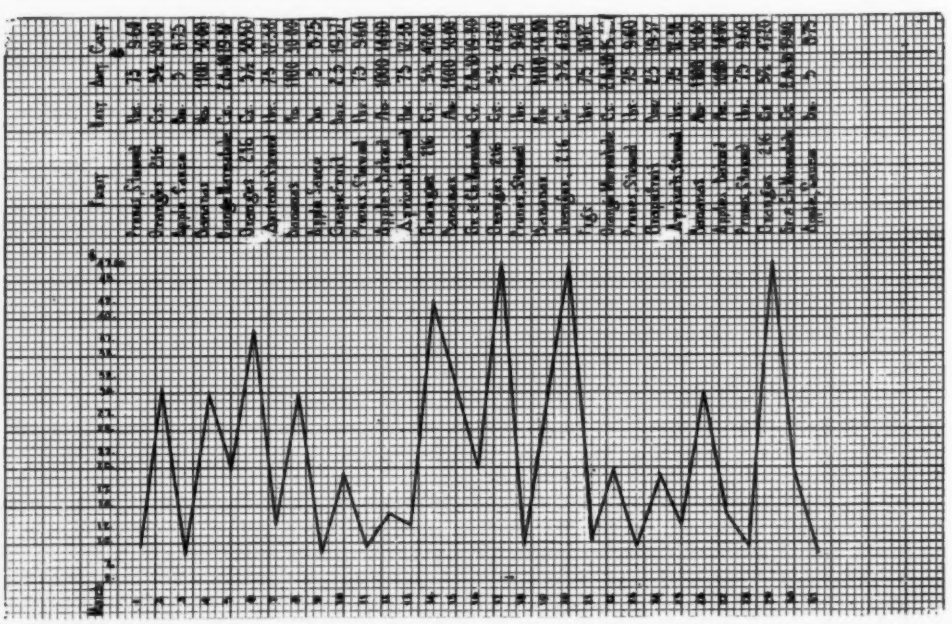

Fig. 5. A graphic representation of the comparative costs of breakfast foods for March, 1930, is shown here. The total cost was $670.43, and the average cost per day, $21.62. Fig. 6, above at the left, shows the comparative cost of vegetables for March, 1929, and March, 1930.

The Community Hospital and Community Health

THE raising of community health standards goes hand in hand with the broadening activities of the community hospital. Through educational work with resident patients, out-patients and community contacts the influence of the hospital is far reaching.

Naturally such surveillance of the community leads to the attack of those abuses of right living which result in an ill-balanced metabolism—so frequently revealed through a diminished alkalinity of the blood and tissues due to an excess of acid products—acidosis.

"Phillips' Milk of Magnesia" promptly counteracts gastric hyperacidity, acidity of the mouth and other of the more obvious manifestations of acidosis. Thus its utility to the hospital and the community is exceptional. Its agreeable taste and appearance, its pronounced affinity for acids and its mild laxative action have found universal appeal and preference in hospitals.

"Phillips' Milk of Magnesia" can be prescribed with confidence. It is palatable, easy to take, and free from distension or gastric irritation.

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the day, may be estimated. For an approximate study of expenditure, therefore, it is not necessary to wait until the end of the month for the per capita cost.

To emphasize the visual aspects of certain costs over a period of one month, comparative costs of various commodities may be charted. As a basis for menu planning, a five weeks' "Dinner Meat Chart" may be found helpful. When the meats are used on the menu according to this schedule and the total cost of the dinner meat used daily is charted, as is shown in the comparative cost sheet (Fig. 3), you will notice that over a period of a month the cost curve may appear high at times when the more expensive cuts of meat are used. It will also be observed that this is balanced by the cheaper or less choice meats, which brings the average within the per capita meat allowance. At the same time this schedule makes possible the much desired variety for the institution menu.

Fig. 4 compares the cost of dinner vegetables. It is not the cost per purchase unit that interests the menu maker, but the number of servings per unit and how the cost of the total amount needed to serve a definite group compares with the total cost of another vegetable which might be bought in some entirely different unit. To serve 1,200 persons it would require twelve crates of cauliflower at a cost of $30, or 350 pounds of carrots at a cost of $8.54. The unit purchase cost is of little value unless it is interpreted into the total cost of the commodity needed. By putting this information on paper, we can readily see the date served, the total amount needed, the total cost and the comparative cost of the vegetables used.

Fig. 5 interprets graphically comparative costs of breakfast fruits. This is especially interesting since it shows the high cost of oranges during the month charted and therefore the necessity of curtailing their use. By studying this chart it is possible to see how the less expensive fruits may be used, especially later in the season, to balance the higher priced fresh fruits which are on the market and are a desirable addition to the menu. It is the variety that makes the menu attractive and satisfying. Knowing the food costs, the dietitian can then provide pleasant surprises for the patients.

Any person working with food costs realizes that from year to year there is a great fluctuation in the cost of commodities. The most striking the past year has been the high cost of potatoes. Fig. 6 shows the comparative cost of vegetables in March, 1929, and March, 1930.

There seems to be no limit to the possibilities in the study of food costs and to the application of this information to the planning of menus. It should be an interesting and fascinating problem to anyone responsible for menu planning in an institution as well as to one entrusted with the financial outlay it entails. The more that is put into such studies, certainly the greater are the returns to the institution in satisfied patients and personnel; then, too, relationship with the business office is more satisfactory.

What Are the Duties of a Directing Dietitian?

What duties confront the hospital dietitian?

Mabel Flanley, recently appointed dietitian of Alfred Hospital, Melbourne, Australia, and formerly chief dietitian of the Seattle General Hospital, Seattle, Wash., outlines these duties as follows: (1) administrative; (2) scientific; (3) teaching.

"Under her administrative duties," writes Miss Flanley in *The Alfred*, "comes the purchase of food and equipment for the dietary department. Whether she does the buying or whether it is done by a purchasing agent, her recommendations regarding quantity and quality of food should be followed and, hence, she must know market conditions and be thoroughly familiar with foods in season. Under this heading also comes the supervision of the food preparation and service of the entire hospital—patients and personnel—and the management of all employees engaged in such work.

"The scientific or therapeutic phase of the dietitian's work is ordinarily quite well understood. Diet therapy has advanced tremendously in the past few years, until now it plays a most important part in preventive medicine, as well as in the cure or care of specific diseases. The diet kitchen is the laboratory for special diets in the hospital and here the dietitian supervises the calculation, or planning, preparation and serving of all such diets. There must be close cooperation with the medical staff and with the laboratory in such cases. The dietitian should take her place with the research workers in the hospital and lend her aid in the carrying out of any problems involving nutrition.

"The educational phase is by no means the least in importance. It is estimated that about one-third of the time of the chief dietitian in a large hospital is devoted to teaching. Much can be done in an indirect way by the example of a balanced diet in the menus of the institution to educate both patient and personnel in proper food habits. Besides this, individual instruction should be given to many patients. Classes for out-patients are also feasible and offer a splendid medium of teaching large groups of people. To the instruction that student nurses receive in invalid cooking, should be added a further course of lectures in dietetics and diet therapy and a period of practical instruction in the diet kitchen."

Nearly 2,000,000 Days of Free Service Given in Pennsylvania Hospitals

More than 1,900,000 days of free service to patients unable to pay for hospital treatment were approved by representative social service and credit workers of the state department of welfare for Pennsylvania during the two-year period from June 1, 1928, to May 31, 1930, according to a report of the director of the bureau of assistance, Mrs. Martha J. Megee, to the state secretary of welfare, Mrs. E. S. H. McCauley.

The report indicates that during this period, the bureau's representatives paid 1,547 visits to hospitals for the purpose of checking cards, giving consultation service and making investigations. The number of cards checked indicates the number of persons who were benefited by this free service. There were 264,624 cards checked. Thus that many citizens of the state received free treatment during a period of two years.

Analyzing the figures, the report says that there is probably some increase in the work during the last two years due to depression which threw many persons out of work, thus rendering them unable to pay for illnesses.

Some hospitals maintain their own social service departments, the report says, while others installed such departments when the need was realized. Every one of the 160 state aided hospitals was visited eight times during the two years which the report covers.

The last legislature appropriated $5,922,800 to the state aided hospitals for the relief of those unable to pay during the biennium from June 1, 1929, to May 31, 1931.

Cocomalt adds 70% to the caloric value of milk . . . and patients like it!

This delicious food drink is ideal for children and convalescents who dislike milk—yet require it for nutritional purposes.

COCOMALT contains the nourishing elements of barley malt, cocoa, sugar, eggs, milk proteins and milk minerals.

It is not a powdered chocolate, not merely a malt or cocoa mixture . . . but a scientific food-concentrate of unusually high food value.

Mixed with milk, Cocomalt meets practically every nutritional requirement of children and convalescents. It actually increases the caloric value of a glass of milk 72%—adding 46% more protein, 56% more mineral salts, 188% more carbohydrates.

Quickly assimilated

While it strengthens and nourishes to a surprising degree, Cocomalt imposes no burden even upon the weakened digestion . . . for it is quickly and easily assimilated. One of the reasons why Cocomalt is so readily assimilated is because of its high enzyme content which greatly assists in the process of digestion.

Contains Vitamin D

Of particular significance, especially in the treatment of growing children, is the fact that Cocomalt contains Vitamin D in sufficient quantity to be of definite anti-rachitic value.

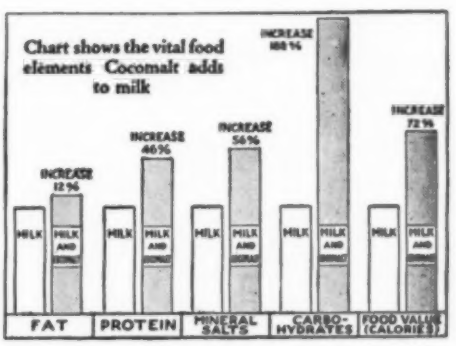
Laboratory tests show that Cocomalt also contains Vitamin A and B complex—both of which play a vital part in overcoming poor appetite and malnutrition.

Increasing numbers of physicians everywhere are prescribing Cocomalt for expectant mothers, growing children, nervous, overworked adults, fretful convalescents. Even those who detest plain milk enjoy the creamy, chocolate flavor smoothness of Cocomalt.

Cocomalt is available at grocery and drug stores everywhere . . . at 30c the ½ lb., 50c the lb., and in the economical 5 pound family size. It is easy to prepare. Just mix it with milk and it's ready to serve. Equally delicious hot or cold.

FREE to Physicians

Cocomalt is made under modern, sanitary conditions—packed in air-tight tin containers. We would like to send you a full-sized can for your own use. Fill out and mail this coupon, and you will receive your can of Cocomalt promptly.



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IT'S FOR MORE NOURISHMENT TO MIL

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Please send me, without charge, a half pound can of Cocomalt.

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Address .....

City ..... *State* .....

OUT-PATIENT SERVICE

Conducted by MICHAEL M. DAVIS, Ph.D.,
Director for Medical Services, Julius Rosenwald Fund, Chicago

Correcting "Dispensary Abuse" by Financial Investigation

By B. C. Mac LEAN, M.D.
Superintendent, Touro Infirmary, New Orleans

THE question of dispensary abuse has been receiving increasing consideration during recent years by the medical profession and social agencies in general and by hospital administrators in particular. By this term is meant the use of the facilities of a charitable dispensary by patients who can afford to pay a physician, and criticism of the hospital on this account is often made not only by the practicing profession but also by those through whose generosity the out-patient service is possible.

Clinics for ambulatory patients in the modern sense were first established in England toward the close of the seventeenth century and on this continent about one hundred years later. They were called dispensaries because medicine was dispensed and indeed until comparatively recent years most of these clinics were "medical soup kitchens." With the developments in the field of medicine, however, it has become recognized that the out-patient department of a hospital is, as Dr. Hugh Cabot has so aptly called it, a "sorting place of disease" and a "cross section of medical practice." The scientific methods of the hospital ward have been applied to the dispensary and the medical dole has developed into medical practice.

The Committee on Dispensary Development which was organized about 1921 under the auspices of the United Hospital Fund with Dr. Michael Davis as executive secretary has been energetic in surveying this branch of hospital activity, and hospital administrators everywhere acknowledge the committee's leadership in this field.

Among the criticisms that have been made is the one that dispensaries bestow medical charity upon persons who have no valid claim to it and that, if doctors receive no compensation for their work, hospitals should be careful that only those who need such a service should receive it. It is important to maintain the self-respect of both the hospital and the community and, while the hospital must accept responsibility as a health center, it should charge nominal fees for visits whenever this is compatible with the economic status of the patient. The straight charity clinic, therefore, is passing and in its place stands a dispensary giving free service to the indigent and service at a reduced or moderate cost to the patient who cannot afford a private physician.

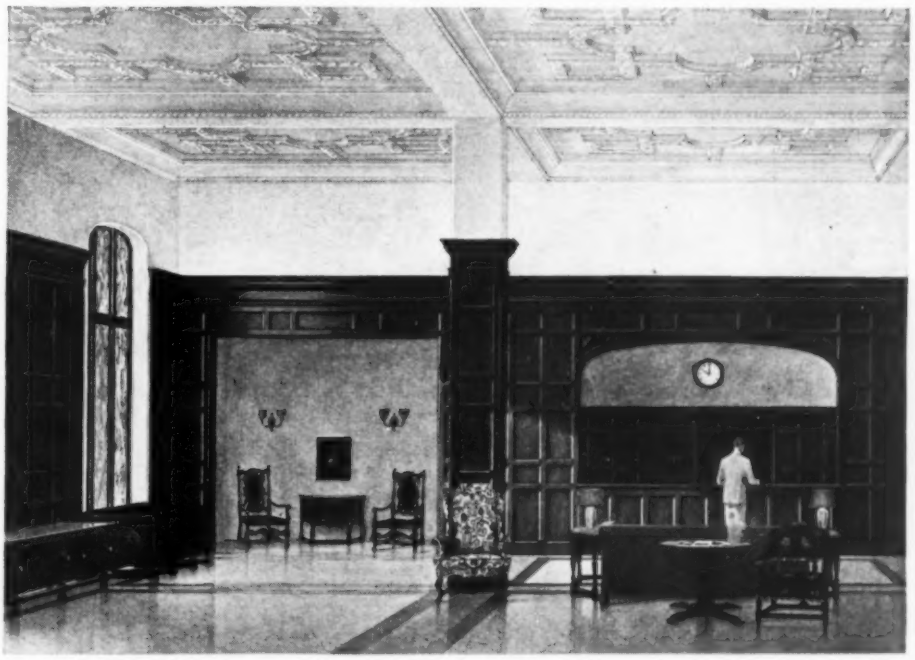
What Patients Seek Out-Patient Service?

The service of an out-patient department is sought generally by three classes of patients: (1) the bona fide indigent; (2) the patient who, while not in a charity class, has difficulty in meeting more than the financial demands made for existence; (3) the patient who wants something for nothing.

It is this last group that makes necessary the establishment of investigation bureaus and the three factors that are then to be considered are: (1) the financial status of the patient; (2) family responsibilities; (3) the cost of needed treatment. In general, the patient is questioned about his income which includes his gross earnings and help from other sources and from relief agencies, and about his property, real and personal, against which

FOUR-YEAR RECORD OF CLINICAL PATIENTS AT MONTREAL GENERAL HOSPITAL

	1926		1927		1928		1929	
Pay	54,775		54,622		54,007		58,414	
Free	60,416	(52.4%)	63,556	(53.7%)	51,452	(48.8%)	43,667	(42.7%)
	115,191		118,178		105,459		102,081	
New cases					20,003		20,551	
Cases referred to private doctors					751		725	
New cases referred to private doctors					3.75%		3.53%	



A NEW SERVICE FOR HOSPITALS

Comprehensive, Complete and Correct

IT IS a recognized fact that in the furnishing of a properly appointed home, the correct application of the decorative arts is an absolute necessity.

This is equally true in the furnishing of a fine hotel or club. It is equally true in the correct furnishing of a hospital.

For some time past, there has been a desire and a movement for more homelike atmosphere in the furnishing of hospitals. To accomplish the proper results, particularly as far as hospitals are concerned, the services of specialists in the study and practice of interior decoration as applied to hospitals, are required.

The Robert W. Irwin Co., with a background of more than fifty years in the designing and manufacture of fine furniture and the decorating of correct interiors, now enters the hospital furnishing and decorating field with a corps of specialists, and with the facilities to conduct this service in a most comprehensive manner on a national scale.

The scope of these services, which includes the *correct* furnishing of entrance halls, foyers, waiting rooms, offices, trustees' rooms, patients' rooms, wards, sun parlors, nurseries, etc., is fully described in a booklet prepared especially for those interested in hospitals under construction or contemplated. A copy will be sent on request.

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Designers and Manufacturers of Fine Furniture for Fifty Years

GRAND RAPIDS, MICHIGAN

The Only Organization of its Kind in the World now Offering this Service

Montreal General Hospital maintains an investigation bureau in connection with its out-patient department. Here each new patient is questioned and the suitability of the case, previous clinic visits, what clinic the patient should attend and the fee to be charged are determined.

are balanced his current expenses and also his debts.

While the results of this form of investigation vary widely with different communities, with different methods and with different degrees of thoroughness of investigation, the following report of a two-year experience since the establishment of an out-patient department investigation bureau at the Montreal General Hospital, Montreal, Quebec,[1] may be of interest.

Deducting industrial and compensation cases and excluding the large out-patient dental clinic, the average annual out-patient department visits to the central division of this hospital total about 120,000. Until January, 1928, it was the custom to ask each patient as he presented himself to the registration office whether he could pay anything, and, if so, whether twenty-five cents or fifty cents. Surprising it is that so many did contribute their mite under a system which presumed so heavily upon their sense of honesty and truth. Abuses were noted daily, however, and in that month an investigation bureau was started with no expensive equipment and with a personnel of only two. One of these was a graduate nurse and the other an office worker who had been attached to the registration office. Neither was trained in social service work but both possessed a knowledge of medical out-patient work, tact, and common sense.

The method followed by the investigators is described here. Every new patient is questioned first by one of these investigators and decisions made as to whether the patient should be treated in this hospital; whether the patient or the patient's family has attended other out-patient clinics, or whether the patient lives in proximity to another dispensary, (thus eliminating many "dispensary shoppers" and avoiding duplication of records); whether the patient is able to pay for the attention of a private doctor; what clinic in the out-patient department the patient should attend; what fee should be charged.

Patients are graded as follows: A, free; B, 10c; C, 25c; D, 50c; E, 75c; F, $1.

Each record card bears one of these letters and this serves to indicate to the cashier what must be paid by the patient on the first and on each subsequent visit. When, however, the period of treatment is prolonged, the patient is often referred again to the investigation bureau and the rating lowered. An attempt is made to estimate the

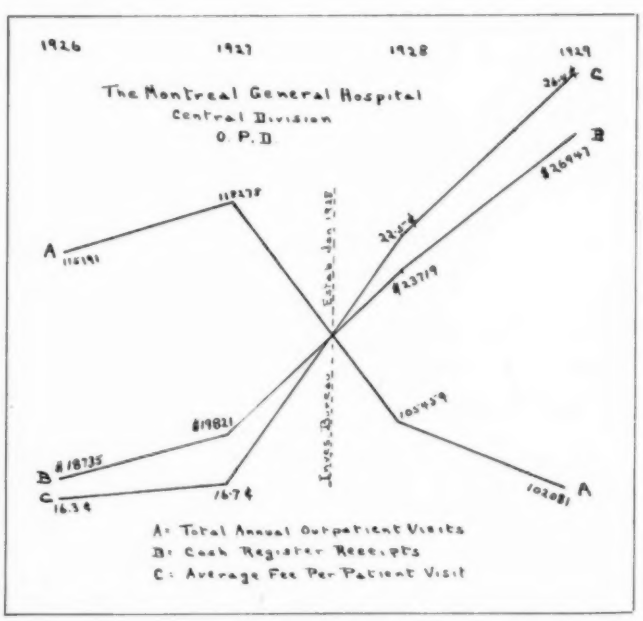

Chart showing how the work of the bureau reduced number of visits in two years' time.

[1] Editor's Note: Doctor Mac Lean was formerly assistant superintendent, Montreal General Hospital, and is therefore well acquainted with the system he describes here.

Successful Hospital Campaigns Since the Market Crash

The remarkable response by the public to Hospital appeals, directed by this firm since the market break, should greatly encourage many Hospital Boards which are needlessly hesitating to present their needs at this time.

Actual Results Achieved

Provident Hospital, Chicago	$3,220,513,	oversubscribed	$220,513
Grace Hospital, Detroit	1,950,000,	oversubscribed	100,000
Pennsylvania Hospital, Philadelphia	868,000,	in addition to $1,000,000 raised two years previously under our direction	
Hospital for the Women of Maryland	1,039,000,	oversubscribed	$ 39,000
Easton Hospital, Easton, Pa.	585,000,	oversubscribed	85,000
Port Huron Hospital, Michigan	358,000,	oversubscribed	58,000
St. Joseph's Hospital, Parkersburg, W. Va.	332,611,	oversubscribed	32,611
Sacred Heart Hospital, Allentown, Pa	331,000,	oversubscribed	81,000
Graham Protestant Hospital, Keokuk, Iowa	76,332,	oversubscribed	1,332

The Public Will Respond

If—there is a real need
—that need is properly presented, and
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This firm will gladly consult with Hospital Boards concerning their financial problems without obligations or cost

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probable extra charges for x-ray and other laboratory work at the time of the first visit and, whenever possible a notation is made of the patient's ability to pay these charges and to what extent. Otherwise, the patient is sent to the investigation bureau and there the appointment is made for laboratory work and the charge fixed, although extra charges are not collected in the investigation bureau but in the department itself. For medicines a charge is made and these are paid for at the pharmacy at the time the prescription is filled. The patient's cash register receipt serves to indicate here the amount that should be collected by the pharmacist. No attempt is made to verify by outside investigation data supplied by patients, either personally or by correspondence. By means, however, of key questions and of references to telephone and city directories, an attempt is made to gauge the accuracy and judge the truth of statements made.

What One Dispensary Does

The accompanying table excludes industrial and compensation cases which average 20,000 visits a year and dental clinic visits of which there is an average of 15,000 annually. It applies to the out-patient department of the central division only of Montreal General Hospital.

It is interesting to note that less than 4 per cent of the patients applying for treatment could be classified as private patients and referred to private physicians. The more important work of such a bureau, therefore, appears to be the elimination of the "dispensary shoppers," the grading of bona fide dispensary patients and the fixing of charges commensurate with their ability to pay for part of the cost of treatment.

That this has been done is strikingly illustrated in the accompanying chart. The number of visits dropped in two years' time from 118,178 to 102,081 while the total revenue rose from $19,821.45 to $26,947.34, an increase per patient visit from 16.7 cents to 26.4 cents. It should be noted that the reduction of patients' visits by 16,000 may be computed as a saving of $15,000 on the basis of a cost per visit of 95 cents as determined by the cost accounting system used by the hospital. These 16,000 are the chronics, the itinerants who wander from clinic to clinic and the seekers of something for nothing.

This report would be incomplete, if it did not mention that not the least of the advantages of such a form of investigation in the out-patient department is the confidence that is inspired among the members of the attending staffs and the disappearance of any suspicion that they are being exploited by the hospital or by the "carriage trade" and "fur coat" type of patient. It has been the experience of the hospital also that many patients who formerly expected and received free treatment, are now converted to the idea of part payment. Many, too, who formerly paid grudgingly a 25-cent fee, now willingly contribute 50 cents or more each visit and are prepared as well to pay as much or indeed more for laboratory work and medicines than they did before.

Perhaps the most striking illustration of the advantage of such a system, however, is the improvement in the status of an institution as a petitioner before the municipal and provincial state authorities when questions of government aid or hospital grants are being discussed.

Undoubtedly, the hospital which is able to show that money given it for medical service is expended on patients who have a bona fide claim for such assistance, will receive more sympathetic consideration from the agencies or individuals who control these grants or benefactions. This in no small measure is accomplished by such a system of investigation as is outlined in this article.

New Booklet on Maternity Care Is Published

"Standards for Maternity Care," a booklet that has been prepared by the committee on maternity care, Children's Welfare Federation, in conjunction with a committee appointed by the New York Obstetrical Society, represents group thinking along lines of adequate care for maternity patients.

Careful observation of procedures and problems in a selected group of hospitals and agencies giving maternity care was made by Marion H. Douglas, R.N., secretary of the committee, and tentative outlines were prepared. These outlines were submitted to and discussed with representative groups and individual members of the fifty-one hospitals and agencies represented on the committee on maternity care of which Hazel Corbin, R.N., is chairman. They were also submitted to the committee appointed by the New York Obstetrical Society, composed of Dr. Ralph W. Lobenstine, chairman, Dr. George W. Kosmak and Dr. O. Paul Humpstone which met with the chairman and secretary at regular intervals to approve the standards.

The suggestions and corrections of these groups were incorporated in the standards. Continuity of service to the patient is the keynote emphasized in the booklet. Content of service, qualification and responsibility of personnel are equally stressed.

The report includes sections on prenatal care, adequate delivery service, after care qualifications and responsibilities of personnel, space, equipment and facilities and suggested record forms.

Copies of the booklet may be obtained from the Children's Welfare Federation, 244 Madison Avenue, New York City.

Physiotherapy and Its Relation to Medicine and Surgery

That only a few hospitals as yet recognize a further responsibility to the patient than the mere medical and surgical relief of his ailment, is the opinion of Dr. Harry E. Mock, writing in the *Physiotherapy Review.*

The enlightened hospital, says Doctor Mock, must install additional facilities acting as adjuncts to the medical and surgical treatment of disabilities. Physical therapy, or the adaptation of proved physical measures to therapeutive purposes, furnishes the most important adjunct. If a hospital is equipped with a physical therapy laboratory the physical measures can start almost simultaneously with the usual medical and surgical procedures.

The chain of treatment in many chronic cases may be divided into two stages: primary or operative stage, which includes surgical treatment, routine surgical dressings and physical therapy while in the hospital; the secondary stage, or after the patient is able to leave the hospital, which includes physical therapy at the physical therapy laboratory, surgical dressings in the surgical dressing room of the laboratory, teaching some member of the family the essential features of physical therapy to be administered by him when the patient is from out of town, weekly examination of the patient by the surgeon and consultation with the physical therapist, and in certain cases referring the patient to the proper agencies for retraining for work, thus completing the cure to the period of economic usefulness.

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Johnson's maintenance service with genuine WAX costs no more than other methods

• As you wax your floors according to the Johnson maintenance schedule, they become increasingly more resistant, more resilient, more durable. Floors of all kinds—wood and the useful new composition materials—respond to genuine wax as to no other treatment on earth! In saying this, we speak from an experience of forty-six years with practically every type of floor maintenance problem—an experience that is reflected in your talk with a Johnson floor maintenance expert. • And Johnson service costs no more than other methods, costs nothing to investigate.

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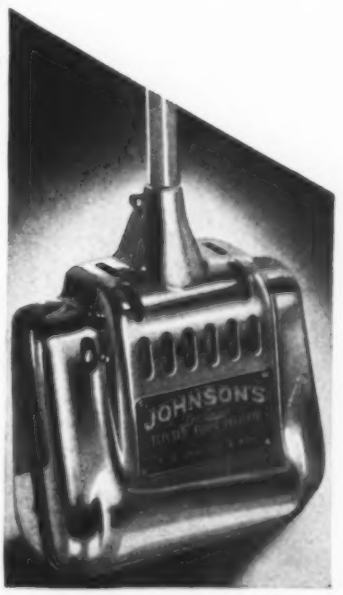

Johnson's WAX for hospital floors

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by C. W. MUNGER, M.D., Director, Grasslands Hospital, Valhalla, N. Y.

How the Mechanical Department Can Function Successfully

By LORENTZ WESTVIG

Chief Engineer, New York Post-Graduate Medical School and Hospital, New York City

AS A HOSPITAL engineer, I should like to point out why deplorable conditions of rundown plants and poor efficiency exist more frequently in hospitals than in the industrial organizations.

The object of a hospital is to render medical aid under favorable conditions and to give doctors and nurses an opportunity to broaden their knowledge or to specialize. Those who direct the policy of the hospital concentrate chiefly on the medical angle and often forget that a well managed mechanical department is essential to economy and often to medical success. Therefore the mechanical department is at a disadvantage from the start.

It is too much to expect that a man trained to provide for the medical needs of the hospital should be able also to understand the important details of the operation of the complicated mechanical equipment of to-day. Added to this, there is constant economic pressure in most hospitals. The executive feels that he must show efficiency in this respect. The mechanical department, little understood and scarcely recognized by the average hospital executive, seems to offer a fine field for the practice of economy. The operating budget is usually cut as low as possible, and cheap help seems a convenient way to reduce expenses. A man to watch the engines and boilers can be had for little pay, and the cheapest man is often accepted as long as legal requirements are met.

Machinery Is Often Neglected

It is surprising to see how much abuse and neglect steam machinery will stand. Years may go by before it is discovered that the plant is in a deplorable condition. Who is there to discover it? As long as the paint lasts and the brass is shining, everything looks well at the occasional inspection by the executive or the trustees. Usually the first sign that things are not right with the power plant is the necessity for calling a repairman. This condition may go on for a short while or for many years. Then there may be frequent changes of engineers and things go from bad to worse. To correct this an able man must be engaged, at a higher salary, to put the plant in operating condition again.

Many hospitals are establishing independent mechanical plants instead of purchasing steam and electricity. Steam can be made anywhere—at a cost below $0.50 per 1,000 pounds if the plant is fairly well laid out and run with reasonable efficiency. In smaller hospitals other conditions have to be considered, for example, labor charges, which run the steam cost to excessive amounts. In larger hospitals of 300 beds and over, an independent plant should be installed. There should be sufficient boiler power to carry the maximum load, with an extra boiler for emergency and cleaning periods. Steam driven generators should have enough capacity to meet the maximum load, plus the desired extra capacity to provide for future additions. To guard against breakdown and to secure reserve power, a Diesel engine should be installed. The capacity of this engine should be large enough to take care of the necessary load in all seasons. The combination steam-Diesel plant makes the institution independent when a breakdown occurs and at the same time ensures a higher plant efficiency for the whole year. When the weather is mild and no heating steam is needed, the Diesel engine starts its work. This engine will produce one kilowatt for ¾ cent, all charges included. For the heat in the fuel consumed by the Diesel engine about 40 per cent is converted into electricity, while 30 per cent goes to the cooling water system and about 30 per cent goes out with the exhaust. The percentages may vary a little with the different types of engines. The exhaust may be run to a waste heat boiler, while water from the cooling system may be sent through this boiler and into the hot water system. The total efficiency of the system from oil to exhaust may be estimated at 70 per cent. The combined steam-Diesel plant ensures safe and efficient operation. Pumps used for important work should be in duplicate, with both steam and electricity for motive power.

The Diesel engine had not gained much ground in the power plant field up to the last decade, but there are now power plants for small municipalities using Diesel engines for all motive power, which operate both economically and safely. It is sometimes claimed that the Diesel engine can be operated by almost anyone, but that is an exaggeration. Adequate mechanical attention and a knowledge of thermodynamics are necessary for

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Now they'll relish the meatless dish *with this savory, tempting aroma*

A MEATLESS dish whose fragrance would do honor to a roast—*Libby's Stringless Beans au Gratin!*

For your patients who can't eat meat, here are the vitamins—dressed in a savory blend of cream sauce, piquant browned cheese and those tender succulent Libby Stringless Beans (Green or Wax).

With Libby's Peas and Libby's Corn, they are the latest addition to the list of 100 world-famous Libby Foods.

These vegetables have become a leading choice with many of our best hospitals, for their unfailing uniformity in high quality and solid pack.

All are grown exclusively in rich garden regions and packed there, fresh from the fields, to preserve their full vitamin content and natural flavor.

Their constant uniformity assures you of a high standard of food services that helps to satisfy particular patients and ultimately increase prestige.

And Libby's Stringless Beans, Peas, Corn (Whole Kernel and Cream Style) are packed in both shelf and institutional sizes.

Order from your jobber who can supply you with Libby Foods at once.

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Libby's Stringless Beans au Gratin

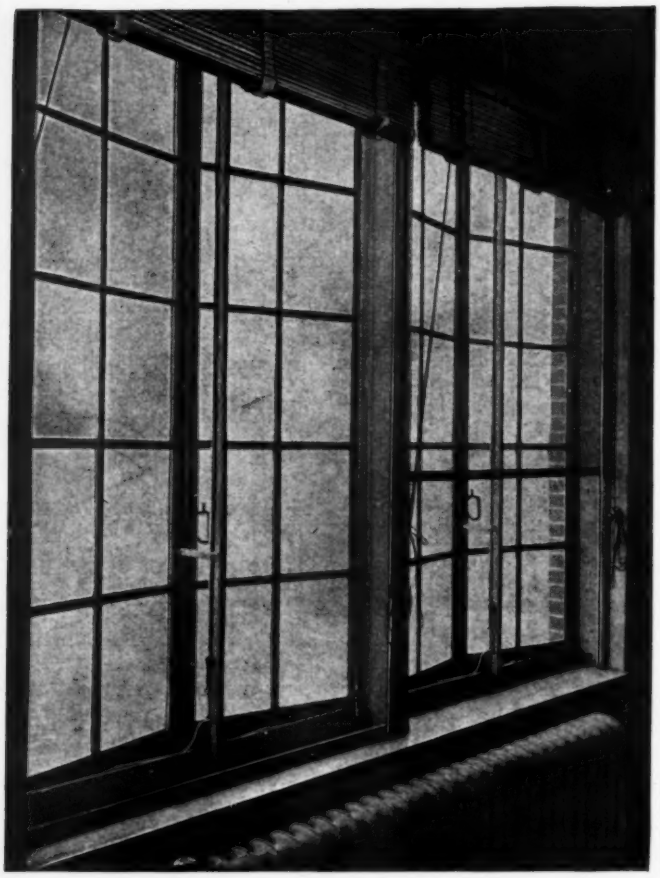
Drain Libby's Stringless Beans. Season, place in individual baking dishes. Cover with rich cream sauce made with Libby's Evaporated Milk and liquid from beans. Sprinkle top with cheese and brown under broiler.

Libby's 100 Foods

These Libby Foods of finest flavor are now packed in regular and special sizes for institutions:

Tomato Juice	Catchup	Hawaiian Pineapple	Pumpkin
Solid pack Tomatoes	Chili Sauce	California Asparagus	Santa Clara Prunes in Syrup
Olives	Salmon	California Fruits	Strawberries
Ripe Olives	Evaporated Milk	Dried Fruits	Loganberries
Pickles	Mince Meat	Grape Fruit	Red Raspberries
Bouillon Cubes	Mixed Vegetables	Spinach, Kraut	Tomato Purée
Beef Extract	Dried Carrots	Jams	*Corn*
Peas, Beets	*Stringless Beans*	Pork and Beans	

Rolscreens
TRADE MARK



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Modern conveniences and years of economic window screen service.

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Built in with the windows (permanent yet easily removed)
No Fall storing
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All metal construction

Hospitals need Rolscreens. The mere act of rolling up the screens allows complete freedom of the openings for washing, painting the woodwork, lowering the awnings or to obtain the full value of light when the window is closed.

These inside screens do not collect the outside grime and soot. They retain a "newness" which does not cast a dirty darkness over the window. Rolscreens are never taken down for storage—just rolled away out of sight, yet always ready for service.

As an economical investment, Rolscreens can not be equalled—no costly, seasonal handling or repairing of wrecked, broken screens, an item of importance to hospitals. Rolscreens are built to last a lifetime and carry a liberal guarantee. Look for the trade mark Rolscreens

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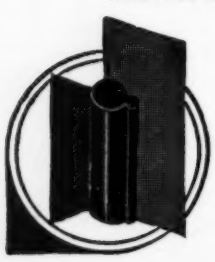

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433 Main Street, Pella, Ia.

Fifteen Patented Features of Rolscreens are essential to practical rolling window screens.

A SECTION through guide showing lug in selvedge of screen wire, which prevents sagging. A "non-sagging" feature found only in Rolscreens.

FULLY GUARANTEED.

the economical and safe operation of this type of engine.

It is a matter of opinion what is the main product and what is the by-product of the plant. During the heating season steam for heating the building and the water, steam for the laundry and the kitchen and for sterilization form the base load of the plant, and the electric current is the by-product. Steam for heating is in most cases the largest amount of steam demanded. During this time the generator acts simply as a reducing valve and incidentally takes at most 15 per cent of the heat in the steam. The exact amount depends upon the type of engine employed.

The question of heating the buildings with exhaust or direct steam has been discussed for years in technical papers. It is claimed by some that no increase in coal consumption takes place when heat is produced with exhaust steam while electricity is being generated, instead of being produced with direct steam. Tests have been made to prove that it costs less to heat with exhaust steam. Which view is correct is a matter of no importance. The fact remains that electric current is a cheap by-product during the heating season. The high cost of generating current during the summer through the lost heat in the exhaust may be reduced considerably by making more extensive use of exhaust steam for steam tables, warming closets and incubators, and by installing a Diesel engine. By balancing operation of the steam machinery to fill the demand for exhaust only, and by using the Diesel engine for the rest of the light and power load, a condition is obtained against which no central power station can compete at a profit. There are as yet no operating data available concerning the efficiency of such a plant, but two or three have been put in operation during the last year and reports from these should soon be available.

Selecting the Fuel

The kind of fuel to be used is determined mainly by the price of the available fuels. Furnace equipment should be selected with this fact in mind. The boilers should be installed so that furnace equipment capable of burning any kind of fuel may be put in as required. The salesman may say that his stoker will handle any kind of coal, but no stoker will handle all kinds of coal with the same success. The cheapest fuel in the East is bituminous coal. The specifications to be made for coal depend on the equipment provided to handle it. When the freight and handling charges are high there is little economy in burning a high ash cheap coal because of a low mine price. The freight cost is the same and often amounts to 60 per cent of the ultimate cost. A bituminous coal containing 6 to 7 per cent ash, 1 per cent sulphur, 20 to 25 per cent volatiles and 14,500 B.t.u. should prove adequate for the average plant. Many mines meet this specification. The most important item next to be determined is the fusibility of the ash, which may spell ruin or success to the stoker equipment, as the ash when melting will close the air holes in the grates and damage them through overheating. Many superintendents have heard the complaint that the coal is no good because it burns on the grates. The remedy is simple—analyze the coal to ascertain the fusing point and then in future specifications raise the fusing point by 200 to 300° F.

In selecting fuel we select the source of heat and the more that can be had for the dollar the better the purchase. In the East bituminous coal gives the most for the money provided suitable equipment is available for its proper combustion.

There is a contrivance on the market in the form of a 180-degree sector with an indicating hand. Scales

FOR YOUR CONVENIENCE

MIDLAND BABEOLEUM

—the Perfect Baby Soap—is now packed in bottles. This perfect soap with finest olive oil base is mild and soothing to tender skin. The new born babe can be safely cared for with this wonder liquid soap. For absolute purity as well as cleansing qualities Midland Babeoleum is unsurpassed.

BABY LOHADOR TRAY DISPENSER

A portable liquid soap server, easily handled and perfectly balanced, will not tip over when full—large capacity bowl; heavy nickel finish.

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have been in constant use by a great many of the country's leading institutions for more than 25 years.

Purity and uniformity come first among Midland Chemists. Every run of every Midland Hospital Product is carefully compounded and frequently tested. Midland Liquid Soaps must pass through extra filtrations and a six months' ageing period completes the purification. We will be glad to furnish samples of Midland Soaps to interested executives.

MIDLAND CHEMICAL LABORATORIES, Inc.

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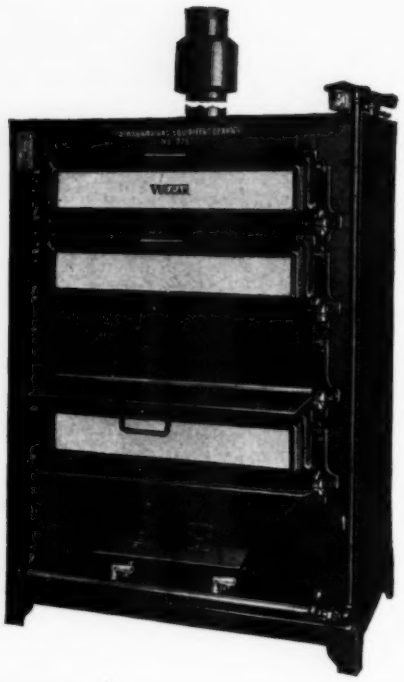

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Thick walls of insulation reduce radiation, cut gas consumption and improve working conditions. Ask for descriptive folder.

Hotel Department: Standard Gas Equipment Corp., 18 East 41st St., New York City. Pacific Coast Distributor: Northwest Gas & Electric Equipment Co., Portland, San Francisco, Los Angeles.

MONEL METAL
Can be furnished in Monel or Alloyheny Metal

For further information on Vulcan equipment, send name and address on margin below.

VULCAN
GAS HOT TOP RANGES

are printed for price according to B.t.u. and ash so that by moving the hand over the scales it is possible to determine the price that should be paid for coal and how great is the ash content. Many buy coal on the basis of millions of B.t.u. per ton and penalize the coal dealer a certain percentage for shortage of B.t.u. and excess of ash.

One ton of Pennsylvania bituminous coal of good grade equals 168 to 170 gallons of the usual fuel oil. At $0.04 per gallon the oil will cost $6.72 and the coal about $6.50 per ton. Tables will show the comparative cost of oil and coal. According to such tables coal at $6.50 per ton equals oil at $1.86 per barrel under actual consumption. In figuring this out in cost of B.t.u. it will be seen that the heat in oil costs more. There is, however, no loss in the ash in oil as there is in the coal, so a comparison between oil and coal on a strict B.t.u. and price basis will not be representative of actual values.

Pulverized Coal Creates Dust Problem

In recent years pulverized coal has been advertised because of its efficiency. When this is used the inconvenience caused by dust discharge should be considered. The major part of the coal, about 70 per cent, is pulverized to 5/1,000 inch. This reduced through combustion creates a dust problem. Various designs of dust traps, smoke washers and high tension electric precipitation processes have been experimented with to catch this dust. These operate with more or less success. The cinder trap claims 75 per cent and the smoke washer 85 per cent efficiency. Both are relatively expensive installations and when the sulphuric acid fumes condense and cause corrosion, upkeep is high. Experiments are being made to find a satisfactory acid resisting metal at a reasonable price. Manu[illegible] pulverized fuel equipment state that the residue of combustion left in the ash pit amounts to from 25 to 30 per cent. Much of it goes up the chimney. If a plant burns fifteen tons a day and the residue of combustion is 10 per cent, and 30 per cent of this is left in the ash pit, then one ton a day will go up the chimney.

Anthracite is a good clean fuel and is used mainly in the smaller plants. It is a little more expensive in heat cost than bituminous coal. There are conditions under which anthracite may be preferable for the larger plant. It depends upon boilers, furnace equipment and local conditions. A fair evaporation for anthracite is eight pounds, as against nine and one-half to eleven pounds for bituminous coal.

To decide whether purchased or privately produced steam should be used in an average sized hospital, seems a simple matter until the public utility salesman starts to juggle the figures. Let us say, for example, that steam is purchased at $0.80 to $1 per 1,000 pounds. Coal of the quality mentioned should be bought at $6.50 a ton, perhaps cheaper. One ton equals 2,000 pounds at an evaporation of 8 pounds of steam per pound of coal, 16,000 pounds of steam. To purchase 16,000 pounds of steam at $0.80 per thousand pounds costs $12.80. An equal amount of steam produced in the hospital plant will cost $8.50, viz.:

Coal, 1 ton	$6.50
Stoking charge	1.00
Insurance, depreciation repair	1.00
16,000 pounds of steam	$8.50

For each ton of coal burned the saving will be $4.30. Suppose there are burned 4,000 tons a year, the saving will be $17,200 or even more when surcharges and meter factors are included. It is evident that purchasing steam

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Seattle, Wash.

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19 INDIVIDUAL UNITS!

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Before making a decision, every conceivable point was considered by the authorities in charge. They considered quietness of operation, convenience of arrangement, appearance, sanitation, dependability, economy. They found that with the separate, flexible units provided by General Electric Commercial Refrigerators, they could save approximately 75% floor space. They found that, by strategically locating individual refrigerators throughout their building, they could save time, avoid confusion, speed up service, and reduce labor cost. As for sanitation, they found General Electric Commercial Refrigerators easy to clean as a China cup. They found that with General Electric Commercial Refrigerators it is unnecessary for attendants to "walk in" for foods; they merely "reach in."

In General Electric Commercial Refrigerators, they found no waste space to refrigerate. This meant *economy*—a daily saving of a considerable amount of money.

In January they ordered 13 refrigerators—*General Electric Commercial Refrigerators.* In February, they ordered six more refrigerators—*General Electric Commercial Refrigerators!*

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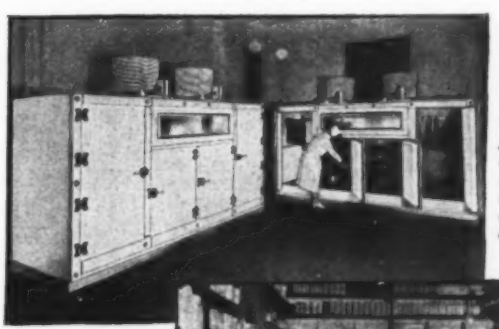
We will gladly send a specialist to talk over *your* requirements. Just drop a line to Section CX-11, Electric Refrigeration Dept., General Electric Co., Hanna Bldg., 1400 Euclid Ave., Cleveland, Ohio.



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COMMERCIAL REFRIGERATOR

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This modern idea saves electricity, throws the light direct on the floor—takes it off the ceiling—non glaring and highly efficient.

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or electric current for a hospital, except the small one, is more expensive under present conditions.

Purchasing electric current when there is a high pressure plant in the hospital has increased the cost in many instances. The best efficiency a central power plant can obtain is 25 per cent from the coal pile to the switchboard and even this is obtained by only a few plants. The hospital plant should easily obtain an average efficiency of 50 per cent during the six winter months. For the six summer months 15 per cent is a conservative estimate. This averages 32.5 per cent for the year. A little more help will be needed when current is generated, but the firemen and engineers are already employed and needed because of other demands. The central power plant can of course buy the coal a little cheaper than the hospital. This saving is more than offset by distributing expenses. Conditions in different parts of the country are so variable and the price of current differs so greatly that each case must be analyzed. What has been said about purchased steam and current can be applied only where the heating season is of several months' duration.

The chief engineer in charge of buildings, plant and mechanical equipment is usually mechanically trained. To be successful, however, he must know the fundamentals of mechanics, thermodynamics and electricity. His ability does not depend on his scholastic attainments or on the number of degrees he is privileged to write after his name, but on sound judgment based on experience. The knowledge required by a hospital engineer is such that a man who has this knowledge could find more profitable occupation in other fields. Probably there will soon be schools for building engineers. At present there is a course in this subject at one of our universities. It does not cover all the requirements, but it offers a start. The hospital engineer must be a steam engineer and he is expected to understand electricity, plumbing, painting and carpentry. He must know about ventilation, laundry machinery, elevators, refrigeration and other specialties. The branches mentioned are highly specialized industries, each one requiring specially trained men to design, build and repair. Because of the many problems the engineer has to deal with in his work, a man of sound judgment and practical training is the man of value. When it is observed how few engineers make a success of their work, it can readily be seen that every one does not possess the ability required. An executive told me once that it is not entirely what a man knows that makes him valuable, but the fact that he knows how and where to get the knowledge when he requires it. I believe there was much truth in that statement.

Water Softening Equipment Desirable

Chemical knowledge has a limited application in the engineering field and consequently is not emphasized. The engineer should possess some knowledge of chemistry, as there are few plants where such knowledge is not required in one form or another. A general water softener to prevent scale forming in the boiler is a necessity in nearly every plant. Standard solutions can be made up by the boiler chemical manufacturer, with instructions for analyzing the water in order to determine the required treatment. Literature on water treatment is available for those who desire to specialize on the subject. To the average engineer, this is only one of the varied matters on which he has to get information when it is required. A hospital is usually equipped with a laboratory where most of the tests required by the engineer can be made.

The engineer should devote more time to the study of sterilization than he usually does. This may seem to be

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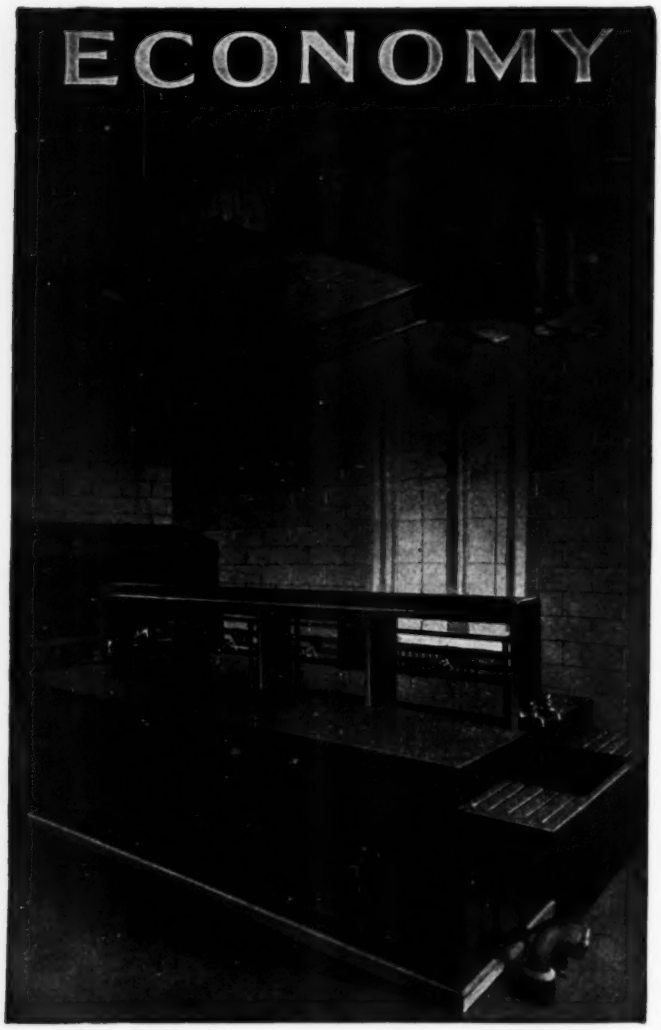
PEQUOTS ARE **USED MORE BY HOSPITALS** THAN ANY OTHER BRAND OF SHEETS



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out of his line, but sterilization is a straight engineering problem, in which air displacement and heat penetration are the main factors. The average well trained nurse knows that everything used for a surgical operation must be sterilized. To ensure this, each article must be put into a vessel of a definite type for a certain time until it is sterilized. There is usually no one to explain to the student nurse the loss of heat, unnecessary inconvenience and damage caused by an overheated sterilizer, nor is she told what takes place in an autoclave or container sterilizer or how to test this when in doubt. The nurse should be told about saturated steam effect and the important things to watch for in securing complete sterilization. If the engineer studies these things he will be able to explain them, as well as the construction of sterilizers and reliable, simple tests that assure perfect sterilization. Static electricity should also be explained with its danger when explosive anesthetics are being used.

Engineer Is a Key Man

The engineer's office if it exists is often forgotten. If there is a space that cannot be used for anything else, it is given to the chief engineer for an office. He is expected to command respect and in many instances to represent the hospital in business dealings. I believe that the importance of the engineer is being recognized and that this will benefit the hospital.

In the hospital the watch engineer should be a machinist. He should know more than how to stop and start an engine. A lower salaried man can look after the engines during operation, and only a small percentage of the engineer's time need be devoted to this. His time can be employed mainly in repairing machinery and equipment, as there is ample use for men of this type in any hospital. The chief engineer should be permitted to pay his men enough to keep them interested in their work rather than in the possibility of finding another position with more pay. I have the impression that petty economy in salaries in hospitals is unduly stressed. Good salaries should be paid and good work demanded. If employees are not up to standard others should be employed. The high cost of upkeep for equipment and buildings can often be traced to carelessness and neglect.

Economical operation and maintenance of the plant depend first upon how it was built, whether suitable, conveniently arranged machinery was installed and whether the foundations and piping are in good condition. The efficiency of the operators more than any other single factor governs the life and economy of the plant. It is surprising to see how often mistakes are made when a new plant is built. Poor selection of boilers and fuel, inefficient analysis of the economy of generated or purchased current, and insufficient space for coal storage, making it impossible to purchase coal at wholesale, direct from the mine, are mistakes that may not all occur at any one plant, but each may be a handicap to efficient operation. Another serious defect is to supply sterilizing steam from only one main pipe. Steam should always be available from two independent sections of the main, so that if one section is shut off the other is available. Similarly, all sterilizing rooms should not be on one branch line. The plant for a hospital must be laid out so as to ensure safe economical and flexible operation in order that it may be possible to shut down any part without serious inconvenience to the functioning of the plant as a whole.

The biggest possible source of waste is in the boiler room. The waste starts in many cases when the fuel is purchased with the wrong specification or even with no specification at all. If the fuel is bought at retail the

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A little Oakite in warm water leaves a clear-cut path of cleanliness with every stroke of mop, sponge, or cloth. Floors, painted walls and woodwork, beds and enameled fixtures are soon made spotless. There is no hard scrubbing or brushing. A rinse leaves surfaces spotless and sanitary.

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Industrial Cleaning Materials and Methods

coal dealer puts in what he has on hand. The next loss occurs during combustion, with excess air as the most common error. The product of combustion, CO_2, under high temperature is cooled by excess air, reducing the heat transfer and decreasing the difference in temperature between the gas and the boiler. Losses through the boiler may be caused by leaky baffle walls and boiler setting. Soot on the fire side and scale on the water side of the boiler do not promote efficiency. I have seen a boiler with these defects which can easily lose 50 per cent of its steaming capacity and burn the full amount of fuel. Uncovered pipes are a big loss. Bare pipes radiate about three B.t.u. per hour per square foot for each degree of temperature difference between pipe and atmosphere. The cost of a steam leak, with coal at $7 per ton and the hole 1/10 inch in diameter will be $480 per year. This is rather a large steam leak and should have been stopped before it attained that size. The opportunity for waste is greater in a boiler room than anywhere else in the plant and it is difficult for inexperienced men to detect this. Greater efficiency may be obtained by making rules for operation and by periodical cleaning and inspections.

Boiler Room Necessities

The installation of meters for complete analysis of the plant is expensive in regard to both initial cost and maintenance. The gauges that seem essential are steam flow meter, pyrometer and draft gauge for each boiler, and a thermometer on the main feed water line. A hand operated flue gas analyzer will give sufficient information for adjusting the air needed for combustion. The instruments mentioned are really a necessity for a well operated boiler room. If scales for weighing the coal are a part of the installation, a sufficiently close check on operation is possible at any time. The gas analysis tells the extent of the combustion, while the feed water thermometer together with the steam flow meter will give the heat absorbed by the boiler and converted into steam. The pyrometer will tell at a glance how the boiler absorbs the heat and the unpreventable loss in exit gases. Many will claim that the pyrometer may be dispensed with, but its simplicity and lack of maintenance cost make it a valuable and easy check on boiler operation.

This is a rough analysis as it does not take into consideration ash pit, radiation, blowdown losses and moisture in the fuel. If followed up from day to day the check is ample and will produce excellent results. A large power plant may well invest money to recover 1 per cent as its consumption may be 1,000 tons a day. If a small plant used the same money to recover 1 per cent and burned ten tons a day it is evident that it would be a doubtful investment. A large plant can keep one or two specially trained men to repair and look after the meters and still get a large return on the investment. It is of utmost importance that when new machinery or instruments are to be installed the situation be carefully analyzed and the right equipment for the purpose selected. Each case must be judged on its merits.

Some hospitals have larger generators than they need, others have complete double boiler equipment, neither of which adds to the safety and economy of operation. One hospital installed an elaborate supply of machine tools, enough to keep a large factory in repair.

An arrangement formerly common, I believe, was to separate the office of the building superintendent and the chief engineer. With this arrangement the engineer worked under the building superintendent. Mechanical services were thus split into two departments, which

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Control its Quality by freezing your own!

In your hospital, ice cream deserves the same careful supervision of quality that is given to every other item of the diet. For ice cream is food—excellent food, when made to high standards of richness and purity—and it must be safeguarded against inferior and impure ingredients.

There is a way for you to *insure* the high quality of your ice cream—the Taylor Freezer way. Without special training, without fuss or muss, and at a saving of ¼ to ½ the cost of factory-frozen products, you can freeze your own ice cream, sherbet, and water ice with a Taylor Freezer.

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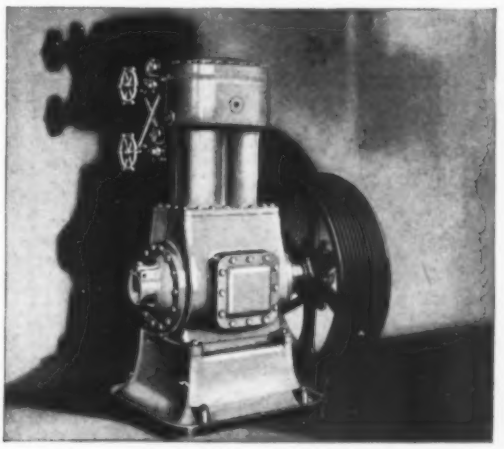
REFRIGERATION



that doesn't fit your specific needs isn't GOOD *refrigeration!*

You don't have to be a refrigeration engineer to recognize this fact! If your refrigeration is *absolutely dependable* in preserving food, vaccines and antitoxins; cooling water and making ice; and taking care of your every other need—all without costly equipment in excess of your peak requirements—then it is *good* refrigeration. Otherwise it is costly—possibly unsafe.

Good refrigeration is the inevitable result of a Lipman installation in your hospital, because that installation is engineered to your needs *exactly*. With no wasteful excess, you get all the refrigeration you require at *lowest* "cost of ownership"—which includes depreciation, plus operating cost, plus service expense. That means lower costs—*positive safety*.

For further facts on *good* refrigeration for your hospital, read our booklet "The ABC's of Electrical Refrigeration." It's yours for the asking—*free!* Write today.

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causes friction. It is difficult to balance help so that there are enough painters, carpenters and other workers to do the required work. The requirements change with varying seasons and conditions. Under a single chief a plumber can be made to help a painter or carpenter and vice versa, thus preventing a large labor turnover.

The superintendent as chief executive is the head of the institution, and the chief engineer should report to him anything of interest in the general operation of the plant and buildings. In special cases in which the engineer is vitally interested and which are beyond the superintendent's power to decide, the engineer should be permitted to explain his case to the board of directors so that if they desire more information he will be able to supply it at once. The case might in this way be more quickly settled than if presented by the superintendent.

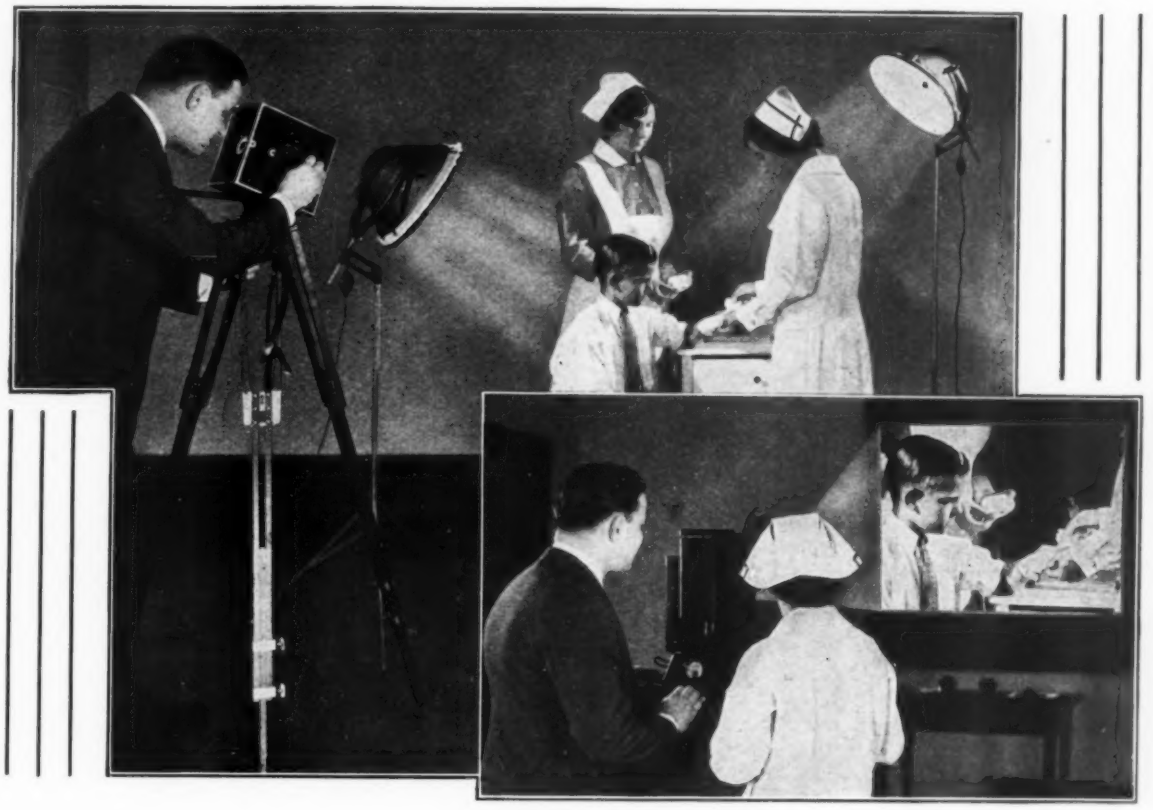
Cooperation With Superintendent Essential

The engineer in a hospital should work to help the medical staff. He is apt to consider much of his work as not important, because he cannot see it from the medical viewpoint. If he takes an interest in his work and receives well timed advice and support from the superintendent, he should after a short while excel in his work.

The mechanical department is a service organization developed according to circumstances prevailing at the institution. With such a force, repairs can quickly be done and at about half the price it would otherwise cost. When working in full competition with outside contractors and repairmen, this department should show a substantial profit to the institution. This also holds good for supplying steam, electricity and refrigeration. When men are engaged from the outside for making repairs or alterations, they are usually paid more than double the rate for each man employed. Material should cost the same, and added to labor and material is 10 to 15 per cent profit, 10 per cent for overhead and 8 to 9 per cent for insurance. The additional cost for outside contracts, besides creating a double labor bill, is from 27 to 35 per cent. Work done by inside help costs from 33 to 50 per cent of the contractors' estimate, not counting the extras that might have been added to the original contract.

The expenditure for the mechanical department for a 400-bed hospital may be $100,000 or more when an independent plant is operated. This is charged to the mechanical department, and the better the department is operated the larger will be the expense. Actually, a small percentage of this amount is used directly for the mechanical department. It is usually easy for any department to use both labor and supplies that are charged to the mechanical division. This may lead to abuse. This service should be charged to each department and a statement rendered each month. Steam for the kitchen, for the laundry and for sterilization should be metered and charged. Though it does not matter much from which pocket the money is taken, as it all comes from the same source, department heads or supervisors like to see expenses for their departments kept as low as possible if they have any interest in their work. With metered steam, standards for quantity can be established and it is thus easier to detect misuse or defective equipment.

If production and service in the mechanical department are put on a practical business basis, many of the unfavorable conditions that prevail will be overcome and it will be possible to see where mistakes are being made. There will then be a better understanding of the mechanical department by those whom it serves.



The Technical Advisor Suggests—

"Motion Picture Photography the Ciné-Kodak Way"

THE simplicity of taking and projecting 16mm., motion pictures of hospital activities makes the necessary equipment practical in many departments of the modern institution.

Various steps in the training of nurses, operative technic, clinical routine, animal experimentation, bacteriological studies, etc., can all be recorded and reenacted by the use of the Ciné-Kodak and accessory equipment.

Films made of exceptionally interesting events have proved of untold value to many hospitals as publicity material to stimulate interest during campaigns for the raising of funds.

All required apparatus—a Ciné-Kodak, two Kodalites, a Kodascope, and a Screen —is priced within the means of the *individual;* so the small cost will prove an economical investment. The staff photographer can produce pictures of excellent quality.

Eastman experts will be pleased to discuss the advantages of this equipment with hospital executives.

EASTMAN KODAK COMPANY

Medical Division Rochester, N. Y.

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SOMETIME during the past month the postman should have brought to your desk your copy of the new Will Ross Catalog.

We wonder if it is too much to hope that many of you feel as one has written, that receiving the catalog is "like getting a letter from an old friend." For after all, this business of building a new catalog has come to be more or less a labor of friendship.

Certainly we trust you will find something of interest in every one of its 98 pages. We feel sure that the more you use it the more confidence you will gain in it as a competent guide to the best in hospital supplies.

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to the patient so that he may read comfortably. If a soft indirect light is desired the lamp can easily be hung in a reversed position.

The lamp may be instantly removed from the bracket for examination purposes, and returned to its position without effort. It is held securely by an automatic spring action, and cannot accidentally be knocked out of the bracket.

New Model Dishwasher Promises Efficient Service

To meet the demands for efficient dishwashing in hospital diet kitchens, a new model dishwasher has recently been perfected and is now being marketed.

The new dishwasher measures 25½ inches in width, 26 inches in length and 57 inches in height. Its shipping weight crated is about 650 pounds. It has a manual rinse controlled by a lever in front of the machine, six spray tubes and also six rinse spray nozzles. The motor is one-half h.p. Emerson, or equal, and is connected on the monel metal shaft to a ball bearing centrifugal pump of a special design. Its capacity is rated at eighty-five gallons a minute at seven pounds pressure. It washes 3,500 dishes an hour. The manufacturers say that it is especially adaptable also to those kitchens that prefer two small units to one large one, many persons claiming that this is more economical since only one of two units is needed during quiet hours. If only one large machine were used, it would have to be operated even when only a limited number of dishes were to be washed. Also it would be impossible to reduce the number of operators. Then, too, a two-unit system provides for service in case one machine fails.